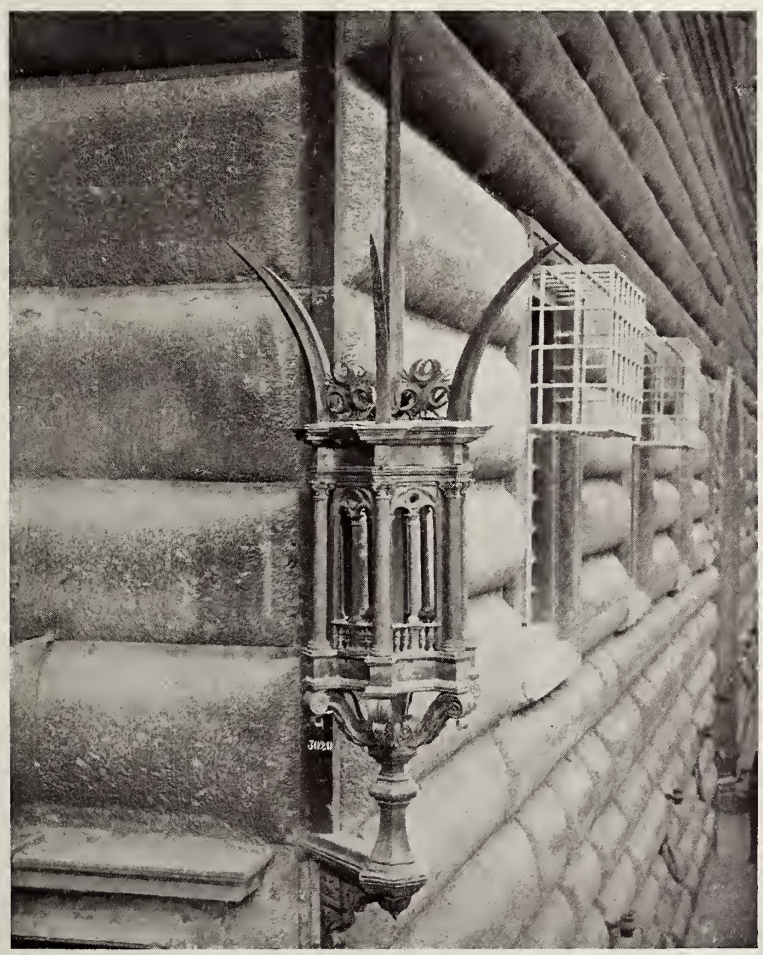
The AMERICAN ARCHITECT



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DETAIL OF HOUSE OF PALLADIO, VICENZA, ITALY

THE AMERICAN ARCHITECT

VOL. CXV WEDNESDAY, JUNE 11, 1919 NUMBER 2268

VIEW FROM NORTHEAST

An Italian House at Miami, Florida

GORDON E. MAYER, *Architect*

FOR many years, Northern men of wealth have sought and found locations in the South where they have built pretentious houses set in spacious grounds. Here, during the rigorous months of the Northern winters, they have found health and recreation amidst the most luxurious surroundings.

The house of Charles L. Briggs, of Haverhill, Mass., located at Miami, Florida, and illustrated in this issue, presents an excellent example of the type of house referred to. Its location is on a lot approximately 200 x 700 feet, and as indicating the highly restricted nature of its neighborhood it may be mentioned that this lot and those of this tract are sold at as high a price as $30,000 for a hundred feet frontage.

The architect states that on receiving the commission, a primitive dense jungle or "hammock" covered the entire site. In order to facilitate the determination of the contours of the property, and to avoid the destruction of natural features of the landscape effects it might be desired to retain, paths were cut through the jungle with machete and axe. Later, when the landscape effects were under consideration, the various paths and roads were all laid out so as to retain as far as possible the fine old tree

growth that had for many hundred years been slowly forming.

The site is one of the most favorable in a section that has unlimited picturesque charms. From an entrance arched by sweet-bay trees, the land slopes gently to the blue waters of Biscayne Bay. The setting of the house has been accomplished with admirable skill. Every natural feature has been maintained. So dense is the natural foliage and planted shrubbery that the outlines of the buff stucco house are scarcely visible from the entrance to the grounds. The effect is that much sought for one where the artist leads the eye by softness of outline and well enveloped color to an effect that stimulates the critical faculty of the beholder.

In a broad space near the house, the original hammock has been left intact, in which fern-lined paths wander aimlessly and cross each other. There is a striking contrast between this wildness and the soft green lawn that runs from the rocky wall down to the driveway. At this point the main walk branches out, and in the enclosure are climbing jasmine, night blooming jasmine and theevetia neerifolia. Right here the buff-tinted house emerges out of a park of Japanese grass, zoisiz pungens and bougainville. An English rock path leads away to the sunken garden. Completely filling up this space close to the house are clumps of dwarf poinsettias, cryptostegia and grandiflori. When the front of the dwelling is reached there is quite a drop to the lower grounds about the bay. This is a broad expanse of lawn, except for the western side, which will ultimately become a flower garden. This will supply the house with a hundred varieties of cut flowers for table decoration. Perhaps the most appealing glimpse is had from the conservatory. The view spreads away over the lawn and clusters of cocoanut palms to the glittering bay. Far out are the dark splashes of the keys, while above this is the changeable sky, sometimes a pale, delicate blue, and on other occasions a flaming melting pot of clouds of all hues. The bay, too, is apt

MAIN ENTRANCE AND GARAGE

MAIN ENTRANCE AND PORTE COCHERE

HOUSE OF CHARLES L. BRIGGS, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*

to "change its spots." Whether the water is indigo or a rich coppery green, the effect upon the sensibilities of the observer is always the same.

It was the idea from the beginning to preserve the grounds in the natural wildness of tangled hammock in so far as it does not interfere with the general plan. This has been accomplished to a satisfying degree. Where flowering shrubs have been introduced, they have been selected with absolute care so that they should not jar upon the original subjects. This recently transplanted nursery stock harmonizes perfectly with the landmarks. Fully to appreciate a group of cocoanut palms, one must see their slender trunks curving upward against a tropic background of indigo water and lighter sky. The effect otherwise is greatly minimized.

This house in its design is thoroughly Italian, with an H-shaped plan. The screened loggia acts as the central feature to divide the recreative and guest rooms on the one hand from the domestic and owner's subdivisions on the other. About the central patio is a cloistered gallery upon which the rooms open through wide French doors. Sweeping stairways descend from the patio, winding around in a fountain pool built in at the base of the eastern wall and supporting the patio balustrade. There are no inside doors on the first floor with the exception of that from the breakfast room to the pantry and kitchen, the rooms being divided by rich colonnades or wide openings.

The dining room is finished in red gum, worked to a finish that equals in richness of color that of Circassian walnut. This room has a spacious fireplace. At the east end large doors open on to a wide dining terrace from which there is an attractive view of the Italian formal garden and terraced lawns in front of the house and extending down to the bay.

THE PATIO

A massive Italian staircase, that has for its origin in design a similar one in northern Italy, leads from the main hall to the second story where there are five large chambers, each with its well appointed bathroom. These rooms open to the central loggia and galleries.

The roof of the house as well as that of the garage has been particularly well handled and the color effect leaves nothing to be desired. The admirable blending with the hues of the landscape pro-

duces just the effect of color that would properly emphasize the entire scheme. These roofs are covered with a hand sprayed roughened Mission tile of many complementary colors. The well appointed garage has in its second story rooms for servants with necessary baths and a sleeping porch.

From the porte-cochère there are steps, leading from the drive to a pergola and large domed fountain, which forms the central motive of the admirably planned landscape gardening effects.

Directly in front of the fountain is an Italian formal garden, from which the terraces and sloping lawns extend down to the sea wall on the bay. As a central feature on the water front there is a Venetian boat landing. This is cantilevered over the water, supported by deep brackets.

The water system provides a hot and cold rain water service to the house, garage and laundry. There is a 50,000 gallon storage and filter tank, built under the house, using the bearing walls of the house for tank walls. These walls are reinforced and waterproofed. All of the water used percolates through a special stone filter partition constructed of Bahama (B. W. I.) limestone. From this tank the water is pumped by an automatically operated pump into a 500 gallon pressure tank.

PERGOLA AND SUMMER HOUSE

Buildings As a Factor in Production Costs*

BUILDINGS as a factor in production are often either not considered at all by managers and production men, or the influence of buildings and their parts on production costs, are not usually given their proper credit.

A building housing a manufacturing industry of whatever character, should be considered as a machine; and due to its first cost, expense of maintenance and cost of depreciation, should be thought of, and always considered the most important machine of the plant.

Unfortunately, some managers overlook the importance of the buildings which house their plants and quite frequently do not correctly charge in their production costs all of the items properly chargeable to building; as for example, interest on the cost of building and land occupied, maintenance, insurance, depreciation, etc. In so far as a manufacturer can reduce these fixed charges, other conditions being equal, he will be able to produce cheaper than his competitor; and while these items of fixed charges are costs that must be paid, irrespective of the type of building occupied, yet their relative amount is determined or controlled to a large degree by the adaptability of the buildings when considered as a huge machine fitted to the peculiar operations of the industry, and may be further controlled by the type of building irrespective of its adaptability.

Perhaps it would aid our discussion if for a moment I imagine myself the president or manager of a successful growing manufacturing corporation whose business has outgrown the plant and where conditions are such as to forbid any attempt at plant enlargement, thus necessitating the construction of a new plant, specially designed to meet the present and probable future needs of the business.

Let me therefore, in the light of my experience, in aiding in the successful solving of such problems, tell you how I would proceed.

I would at the outset frankly admit that I did not have a monopoly of human knowledge. That while I was proud to be known as the guiding spirit of a successful business, my success, or rather the success of the business which I own or control, of which I am only one unit, should not be considered as sufficient justification for me to assume that I could unaided, design and create a new modern manufacturing plant. I would pursue the same method of solving this problem that I daily use in operating my present plant and that is to frankly admit that this is the day of specialists and that in order to secure the best, I must employ the best experience obtainable. Therefore, the first thing I would do would be to employ an architect. I would make him my confident as to my plans, my financial resources, my prospects and my dreams for the future. In short, I would give him that same degree of confidence that I give to my family physician or to my attorney and more than I ever gave to my minister.

Having placed the problem in the hands of an architect, let us follow very briefly the work of the architect.

His first duty will be to make a careful study of the equipment, methods of production, etc., of the present plant it is proposed to abandon. He will interview shop superintendents, foremen, etc., and in this way become familiar with the present shop production. It is often even desirable to make a study of shop practices in other plants producing the same general class of goods. A few such study days will usually be sufficient to enable an architect to prepare a preliminary block plan of the new plant that would probably work out most satisfactorily. This block plan, however, will have been prepared without reference to any particular locality. It will deal with the problem broadly and without reference to building types, but will indicate the number of buildings, general grouping, number of stories, etc., that would be required properly to house the industry.

This block plan will then be submitted to Mr. President and discussed in detail, and it is very desirable that it be discussed and criticized not only by the president and manager, but by production managers, shop superintendents, etc. After the conference a new block plan would be prepared. This plan would then be re-submitted and at this conference the general type of buildings should be discussed. This method of approaching a problem by preparing tentative plans, revising same and re-revising same will be pursued until the best plan for the particular business in question has been developed.

At this stage another expert must be employed, the Realtor, an expert real estate operator. The realtor will be given a copy of the ideal plan and his advice requested as to the best possible location, and here is where many plant managers fail. They do not rely enough on the advice of their realtor as to location. The successful realtor is a man who knows not only real values; the tendencies in the development of a city or community, but he knows transportation, he knows where the various classes of skilled mechanics reside, etc., and his problem is

*An address by F. E. Davidson, A.I.A., M.Am.Soc.C.E., before the Western Efficiency Society, Chicago, May 14, 1919.

to find a piece of property as near like the ideal block plan as it is possible to secure. The price of the land must be carefully considered and must have a certain well known relation to the cost of the proposed improvement.

Then after the property is secured, either by lease or direct purchase, the architect must revise his block plan to fit the land secured. Then, after the general plan has been tentatively approved, the question of the type of the various buildings must be determined.

Briefly, insurance interests recognize three general types of building—ordinary, mill and fireproof. These may be either sprinklered or unsprinklered and in each general type there may be many modifications made that will affect insurance charges, but in determining the general types, as well as the degree of modifications to be made in the type selected, other questions than the one of insurance must be considered.

First, initial cost or the maximum funds that are available for buildings. Quite frequently an owner may be convinced that the type actually determined on is not the ideal one, yet the item of first cost may compel its adoption. Very briefly, all insurance interests consider the type of building known as standard mill sprinklered the ideal factory building; but please note that the standard mill building is one with all stairs and elevators enclosed by brick walls, all doors in same self-closing fully approved fire-doors, all windows in exposed walls fireproof with fire resisting glass, and in which there are no horizontal or vertical openings unprotected, and in which no floor is less than 3½ in. in net thickness. Such a building is given the same insurance rating by the large insurance underwriters as is given to a so-called fireproof structure, even if sprinklered, and with all horizontal and vertical openings protected as required for a standard mill structure; and a rating approximately 1/10 of that given to a so-called fireproof structure if unsprinklered.

Factories of ordinary construction if unsprinklered carry such a high rate of insurance that their occupancy by any manufacturing concern, unless as a temporary expedient, is bound to be unprofitable, as in many cases the insurance rate is even greater than the interest charge on the plant investment, and it must be remembered that insurance rates are based on the tables of actual losses from which there is no appeal. I have had many clients who questioned the justification of the underwriters in making the same rate on a fireproof building, even if sprinklered, as they do on a standard mill sprinklered structure, yet it must be conceded that experience has proved that a fireproof structure is, as a matter of absolute fact, a reverberatory furnace and that the actual percentage of loss by fire in fireproof structures is greater in proportion to insurable values than in standard mill sprinklered buildings.

Another factor in determining the general type of building is its adaptability to change for other uses; the readiness with which alterations or changes may be made in the structure as the business to be housed develops, or as improvements in machinery are developed and shop processes change. Changes can readily and inexpensively be made in timber structures, but extensive changes in fireproof structures can be made only at great expense, and in the case of fireproof structures, known as flat slab, changes cannot be made at any time without endangering the stability of the entire structure.

There are in addition to the questions above noted some additional arguments in favor of the standard mill factory building. One of the principal ones which has recently been brought to the writer's attention is the fact that a skilled artisan will not work if compelled to stand on a concrete floor, if he can secure employment at equal wages in a standard mill building. Many owners of fireproof buildings have had trouble in keeping help, due to this reason only, and in some fireproof factories it has been necessary to cover the concrete floors with a layer of asphalt, or to place cork carpet or wood thereon, in order to render the factory "habitable."

There is yet another argument in favor of the standard mill building, which in any large city should be given serious consideration, and that is the salvage value of the building itself. We all know that a standard mill building can be wrecked, and if the work is carefully done all the structural material can be used in another structure, whereas in wrecking a concrete structure there is no salvage. In fact, I have been quoted by one of the largest contracting firms in Chicago a price for the wrecking of a monolithic concrete building which amounted to a trifle more than one-half of the original cost of the building, and our American cities are growing so rapidly that it would indeed be a courageous investor or at least one blessed with a prophetic vision, who could predict as to what particular use a certain piece of property would be best adapted for twenty-five or thirty years in the future.

Now, as to depreciation. A factory building of ordinary construction should be given a depreciation charge of at least 10 per cent annually, whereas a factory of standard mill construction should be depreciated not to exceed 3½ per cent per year, and a fireproof structure at a rate of at least 3 per cent per annum.

As to items of maintenance: It is, of course, evident that as much outside painting, and in fact as much interior painting and calcimining, or whitewashing, will be required for a fireproof building

as for a building of standard mill construction. Practically the only thing which wears and must be replaced in a mill building is the finished flooring. I do not know of any accurate records of maintenance cost of a standard mill building which will average more than three-fourths of one per cent per year. Yet, on the other hand, I do not know of any records of the maintenance charges on fireproof buildings which will average less than one-half of one per cent per year.

As to the first cost, which item will determine the annual interest charge, if we take the cost of the standard mill sprinklered building at 100 per cent, the cost under present conditions in the market of both labor and material for a standard fireproof sprinklered structure will be equivalent to approximately 120 per cent and for ordinary construction about 85 per cent; but here again local city regulations have a bearing on the problem. Large unobstructive floor areas are desirable in any manufacturing plant and while under any and all city and state regulations anywhere, buildings only one story in height may have any floor area, irrespective of the type of construction, yet the owner will find that there is an economical maximum even when first cost is considered if the building is sprinkled for the reason that the size of fire pumps, tanks, water supplies, etc., are determined by the maximum floor areas between fire walls to be protected, and even if sprinklered that the insurance underwriters will place a gradually increasing charge for floor areas in excess of a certain well established minimum.

I will now speak very briefly of some of the appurtenances to factory buildings. The question of heating is one of the most important, but this question is related to that of power. Should power to operate the plant be secured from central station and a boiler plant installed to provide heat only, or should an independent power plant be installed and heat be secured as a by-product from the operation of the power plant? There are so many factors to the equation that each proposed industrial plant must be separately analyzed. Some of the factors to the equation are, is live steam required in connection with manufacturing operations, is the power load fairly constant or subject to excessive variations? What is the proportion of the total maximum power load to average heating load, etc.?

Having determined whether a power plant or heating plant should be installed, the next question is, if heating plant only, what system to install. Whether hot blast or direct steam, and if direct steam, whether single pipe gravity, two-pipe gravity or vacuum. This question will be easily solved by determining the amount of radiation required and the distance from the heating source.

The question of elevator service is also an important one, and the proper location of elevators in any building is one frequently ignored. As to type of elevator, the rapid development of the modern electric machine has been so successful that it may be unconditionally recommended for most installations. Care must, however, be taken to deal with manufacturers of known standing.

Under the sub-heading of traveling cranes might well be included conveying apparatus of all kinds. This is truly an age of machinery and the greatest problem any manufacturer will be compelled to solve in the future is how to conserve man-power. The problem of securing sufficient experienced labor to operate any plant today is most serious and will grow more acute in the years to come. Therefore, particular study should be given to any plant design to adopt all labor-saving devices that have proved successful, particularly in relation to the handling of raw materials and the finished product, and frequently the incompleted output. I might discuss this topic for hours, but let it be sufficient to say that if it is true that he who can cause two blades of grass to grow where only one grew before is a benefactor of mankind, it is equally true that any production man who can devise a means whereby one man with the aid of machinery of any kind can produce as much as two without this aid is also a benefactor of his race.

Referring to the sub-title plumbing, it will be sufficient to state that the general improvement in the invention and manufacture of plumbing specialties and their installation during the past twenty years has been greater and more advanced than any other specialty allied to building. The importance of scientifically installed plumbing is now so well recognized that its installation is regulated by both State and local authorities everywhere. Owners of large industrial plants have found that the installation of the very best plumbing specialties is in the end the cheapest when first cost and maintenance are considered.

In the solution of all of the problems, your architect will call to his assistance many experts. This is an age of specialists, and while every successful architect must needs have a working knowledge of all the arts and trades he must assemble to produce any building, yet the time permitted by the requirements of his client for speed, forbids that he should in person do more than coordinate the work of many experts into an orderly and harmonious whole.

Permit me to offer this thought to you plant managers and to you future captains of industry, that whenever you have a new plant to build always employ an architect. He has something to sell you

not possessed by any other professional man on earth. He has a vision, a power of visualizing the possibility of your business that some of you do not yourself possess and remember that an architect is every kind of an engineer ever invented.

As a civil engineer, he must be familiar with all of the various types of building construction, and the peculiar adaptability of various methods and types of construction to meet varying conditions.

As a sanitary and hydraulic engineer, he has to do with water supply and sewage disposal.

As an insurance engineer, he must be familiar with the requirements of all insurance underwriters, and know how to secure for his client the minimum insurance charges.

He must be a production engineer, able to so lay out and group the various manufacturing departments so as to secure, as far as is mechanically possible, the lowest cost in production.

He must be an efficiency engineer, able to advise his client in the proper selection of the mechanical aids to production.

He must be a mechanical engineer, able to advise his client as to the power and engine-room equipment, and honest enough to advise against a power-plant equipment if power can be purchased cheaper than it can be produced.

He must also be an illuminating engineer, a structural engineer, as well as several other kinds of engineers whose exact status has not yet been legally defined, in addition to which he must be a skilled diplomat and a mind-reader. He must be familiar with the general principles of law and be as well a successful business man. He must be a diplomat in dealing with his client, as it is a peculiar fact, that, while a man is willing to trust his law business to the judgment of his attorney, his life and the lives of his family to his family physician, his religion and future life to his spiritual minister, yet, when it comes to the design of a manufacturing plant in ninety-nine cases out of every one hundred he knows more about economic design than any architect could ever hope to learn if he lived to be as old as Methuselah. Therefore, the architect must be a diplomat in the broadest sense, as it would be absurd in many cases to give a client that for which he asks. So that he must, in reality, while apparently doing one thing, be able to accomplish by finesse what he knows his client should have.

As an architect, he should be able to give to the design of plant an individuality that will at once indicate for what purpose the plant was designed, and not follow blindly one of the three modern Chicago architectural schools, to which the writer will refer as, *first,* the Chicago River Renaissance, *second* the Stock Yard Byzantine, and *third,* the Calumet Saracenic. He must ever have in mind the self-evident fact that the handling of men more than the operating of machinery is the big problem in manufacturing; and in the design of any industrial plant, no matter how small, the comfort of the employees of that plant should ever be borne in mind. Labor is always more efficient and, therefore, more productive in a well-lighted, well-ventilated, sanitary shop, and the experience of many large manufacturers has proved that the fee of the landscape gardener and his assistants always pays larger dividends on the sums so invested, and remember that in the detailed design of your plant you should give your architect a free hand after you have determined on the essential things that you think you must have. If you will do this, he will make your plant not only all that you demand, but he will put into it some of himself that will make your plant a better place not only to manufacture goods, but a better place for your employees to spend a large share of their lives. Artistically designed buildings cost no more than others, but beauty and harmony in surroundings add something to the conditions under which your employees are compelled to labor, and these conditions will react to increase the output of your products with correspondingly greater profits to your company.

Landscape gardening, recreation rooms, gymnasiums, rest and reading rooms, all pay and pay probably greater dividends than any other investment made in connection with any new industrial plant.

Important Matters Discussed at Annual Meeting of National Fire Protection Association

By Rudolph P. Miller, *Consulting Engineer*

THE National Fire Protection Association held its twenty-third annual meeting May 6, 7 and 8, at Ottawa, Ontario, Canada. While the holding of this meeting in Ottawa was a departure from the usual practice of meeting in alternate years in Chicago and New York, there was for that reason no diminution in attendance nor lack of interest in the work of the convention.

The Committee on Fire Resistive Construction submitted a specification, which with a few minor alterations was adopted, of a Grade B office building. The distinguishing feature between this grade and the Grade A building is that the first floor and basement are permitted to be used for the sale and storage of certain kinds of merchandise. In the Grade A building that activity is not permitted in any part of the building.

The very difficult problem of adequate exit facilities for department stores was discussed in a report from the Committee on Safety to Life. The inability to state definitely the number of persons that would occupy a department store at any one time leads the Committee to recommend proportioning the stairs and other exits to the floor areas, allowing a certain number of square feet of floor surface to each person. The specifications are tentative only and the Committee requests criticisms and suggestions. The report also deals with the necessary exit facilities from schools.

After several years of controversy the Committee on Hazardous Chemicals and Explosives has now reported regulations governing the storage and handling of motion picture films. The extreme hazard of this material was well illustrated in a series of motion pictures shown by Mr. J. F. Ancona of the Eastman Kodak Company, of tests of automatic sprinklers in film storage vaults. Fires started in these vaults in which films had been stored caused flames of enormous size and heat intensity to shoot out a distance of seventy feet. How this great hazard was largely controlled by different numbers of automatic sprinkler heads was shown in the pictures. The conclusions drawn from these tests were part of the Committee's report. The Committee proposes to deal, in the near future, with other celluloid products.

The only formal paper presented at the meeting was one on Certificates of Occupancy. This paper described the certificate of occupancy as it has recently been prescribed in the building laws of New York City. The reason for its inauguration was given by several instances illustrating the defeat of the use of restrictions of buildings, and its effect in overcoming this difficulty was shown by the legal test to which, since its establishment, the provision for the certificate has been subjected. How the certificate should be prepared and the general contents were discussed and its value to the owner was also pointed out.

A visit to the new parliament building, now in course of construction to replace the one destroyed by fire during the war, proved of great interest to the members.

The officers elected for the coming year were: Mr. F. J. T. Stewart, New York, as president; Mr. H. O. Lacount, Boston, as first vice-president; Mr. W. E. Mallalieu, New York, as second vice-president; Mr. Franklin H. Wentworth, Boston, secretary-treasurer; and Mr. Rudolph P. Miller, New York, as chairman of the executive committee. Mr. D. Knickerbacker Boyd of Philadelphia, represents the architects of the executive committee.

A Recent Legal Decision

Decision of Architect or Engineer—Damages Caused by Shifting of Site of Work

The rule in the federal courts is that where a construction contract provides that the work should be done under the supervision of an architect or engineer, who is empowered to determine the question of classification and to make estimates and allow them, his decision is binding upon both parties, and can be impeached only for fraud or such gross mistake as implies bad faith.

Where a city enters into a contract with a contractor to build a building, or to lay a sewer, or to do any other work of that kind, it warrants, just the same as a private owner would warrant, the delivery of the site upon which the work is to be constructed. If the city or owner, from whatever cause, whether blamelessly or wrongfully, is unable to deliver the site, either would be equally responsible in damages to the contractor for the interruption of his work. So, where a city did not have title to the site selected for an improvement, and the contractor was thereby delayed and injured, items such as added expense due to disorganization of his force and the shifting of his material to other positions, were items of damage and expense which it was the duty of the engineer and the authorities to estimate and allow.—*Casey v. City of Canton*, 253 *Fed.* 589.

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Make Money More Available for Mortgage Loans

NOW that it is conceded in financial and building circles that it has been the high cost of money and labor and not the high cost of materials that has been responsible for increased construction costs, efforts that are being made in various municipalities to put plans into execution whereby money may become more available for mortgage loans, are meeting with real success. Most practical of the ideas so far advanced to make loan money more liquid are those which would exempt from income tax mortgage investments up to $30,000 or $40,000, and the Federal Loan Bank plan. In the present situation when so much depends upon speed in getting as many homes built by autumn as possible to aid in the solution of the housing problem, the exemption from income tax plan seems to be the most practical of those advanced. It would take considerable time for the Loan Bank plan to be put in operation and consequently it could not aid much in the present emergency. Exemptions from State income tax can be made quickly and then the Federal authorities can be asked to give some exemptions in favor of the mortgage holdings up to a reasonable amount.

It is unfair for the Government to put farm loan bonds at 5 per cent to the investor and exempt it from all taxation. That is favoring one class against the rest of the people. The time should soon come when mortgage loans for building can be had the same as farm loans.

Opponents of these two plans, which have been strongly advocated by the New York State Reconstruction Commission, claim that in the case of the Federal Loan Home Bank there would be difficulty in the selling of bonds at this time, and that the exemption of mortgage loans from the income tax is poor principle, especially since United States Government bonds are still subject to tax. They charge bad methods, but is it not the best thing to be done under present conditions? It surely makes for the liquidity of loans and that is what counts above all else in the present situation.

IN attempting to solve New York City's problem, which may be truly said to be barometric of conditions elsewhere in the country, suggestions made by Samuel Untermeyer, widely known lawyer, include immediate disposal by insurance companies of the bank and other stocks which they were required by law to dispose of eight years ago; the compulsory investment in mortgages and bonds in unencumbered real property of one-half of the assets of life, fire, health and casualty companies and the savings banks of the state; and investigation by the Federal trade commission "to break up unlawful combinations that now exist in the building trades."

It would appear from these representations that what has been called the high cost of money is, in New York at least, due to the improper diversion of funds into channels which are more lucrative to the loaning companies, and to a discrimination which adversely affects the amount that would otherwise be available for mortgage loans.

It becomes each day more clearly apparent that the claims loudly set forth that it is the high cost of materials that is preventing the normal resumption of building is in a great measure propaganda to disguise the real cause. That the actual retardant is, in this immediate locality at least, as set forth by Mr. Untermeyer is conclusively proven.

Efficiency and Service

REPORTS from many correspondents indicate that in spite of the pessimistic attitude in some quarters, the progress of building is going steadily and consistently forward, and that architects all over the country are again busy.

The past two years of comparative inaction have afforded opportunity for careful contemplation of the important problems which have had to be considered by architects. The deliberations at the recent convention are already becoming realized in

action that will be of the most constructive and upbuilding character.

There is an active demand for the services of competent draughtsmen, and, with the gradual but certain loosening of the money market, as to mortgage loans—the real deterrent to a quick building resumption—it is reasonable to predict greater building progress than has been seen for several years.

TWO things the war has emphasized as essential to success in every activity. These are efficiency and service. We practically won our part in the war by the cultivation to the highest degree of these essential characteristics, and in the profession of architecture we shall regain any lost ground by the same means, giving the most efficient and personal service.

Architecture today is not, if it ever was, a monopolistic profession. Evidence has multiplied that other professions or enterprises in building have felt competent to usurp the functions of the architect. The lesson that has been learned by the general public has shown that it is futile to disregard the great technical advantage that comes when properly trained architects are placed in authority over work for which their professional training particularly fits them. It has also been very clearly shown that as organizers and administrators, architects are by education and practice absolutely essential in every building operation and that in every instance where this service has not been called for the result has been unsatisfactory.

THOSE whose business took them among the many newly formed departments and bureaus in Washington during war times were able to learn the great and exceedingly valuable work that architects were doing. The immense value of this service is not now generally appreciated, but it is certain that in every future building operation which will be carried forward by the Government its successful outcome will be largely influenced by the vast amount of valuable data that architects secured and made available while these departments and bureaus were in operation.

It was efficiency and service that produced this admirable result. There has been no loud proclaiming as to just what has been done, but those in a position to know are very certain that whatever we shall achieve in the always present big problems of housing, public buildings, and the large emergent work during unusual periods will have been simplified and made easy by the quiet and efficient work of architects during war time.

IT will be unfortunate if this great amount of valuable data is not permitted to become more widely known. The Council of National Defense has announced its readiness to place at the disposal of the public the large mass of information assembled and classified by this Reconstruction Research Division.

As a record of efficiency and service, it will be something in which every man in the profession will feel a personal pride. It will afford an opportunity to learn the identity of the group of efficient men who accomplished that great work. Their retiring and properly modest attitude toward the part they so representatively played during the period we were at war is entirely commendable, but they should receive the credit that is justly due them. Will not some architect turn historian and under the title of efficiency and service, write a review of these men's unselfish efforts?

PLATE 188

VIEW FROM THE SOUTHEAST

HOUSE OF CHARLES L. BRIGGS, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*

PLATE 189

EASTERN ELEVATION AS SEEN FROM BAY

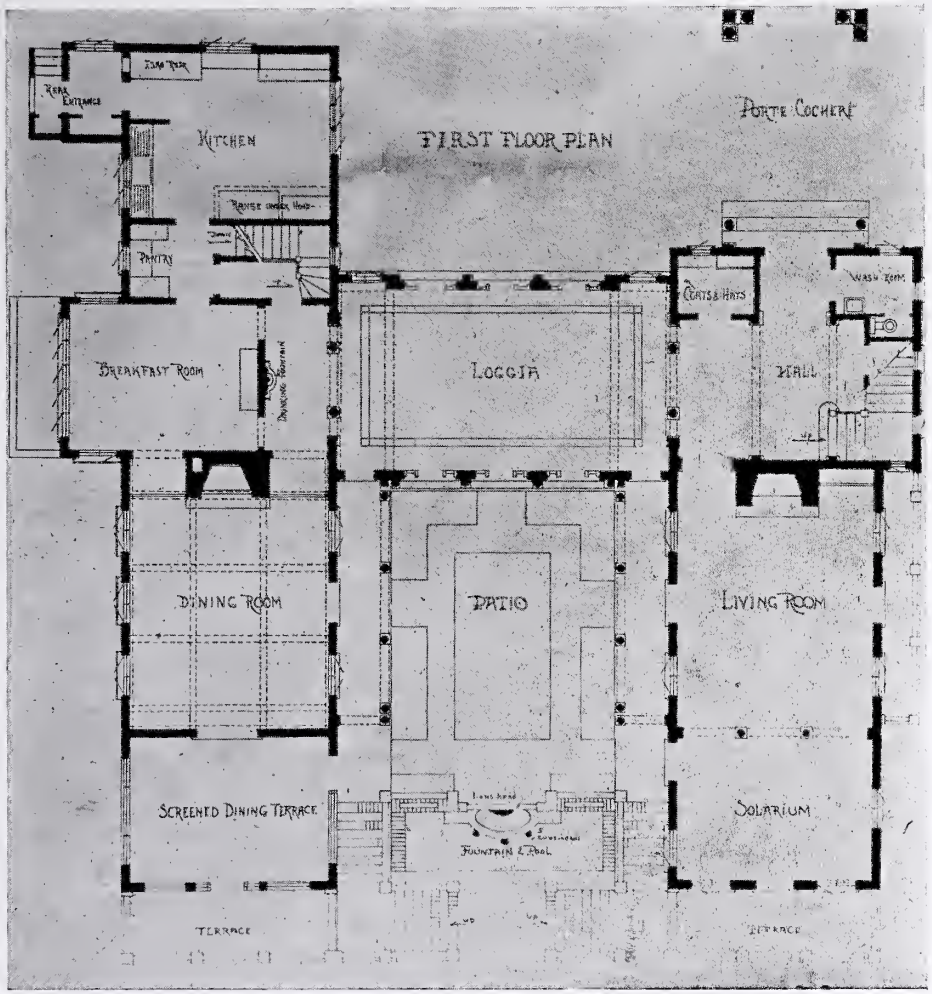
HOUSE OF CHARLES L. BRIGGS, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*

PLATE 190 VIEW FROM NORTHWEST

HOUSE OF CHARLES L. BRIGGS, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*



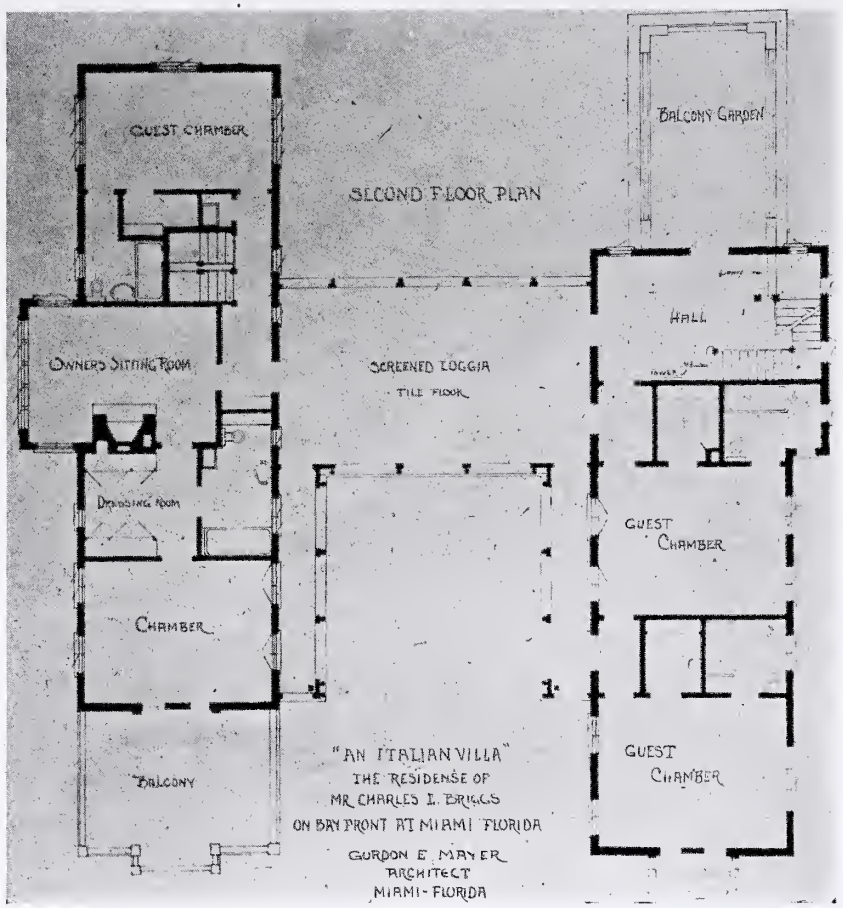


PLATE 191

HOUSE OF CHARLES L. BRIGGS, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*

FIRST FLOOR LOGGIA

PLATE 192 LIVING ROOM

HOUSE OF CHARLES L. BRIGGS, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*

PLATE 193

GARAGE, SERVANTS' QUARTERS AND LAUNDRY

HOUSE OF CHARLES L. BRIGGS, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*

PLATE 194 PERGOLA AND SUMMER HOUSE

HOUSE OF CHARLES L. BRIGGS, MIAMI, FLORIDA

GORDON E. MAYER, *ARCHITECT*

Beaux-Arts Institute of Design

DIRECTOR OF THE INSTITUTE, LLOYD WARREN

ARCHITECTURE, WILLIAM F. LAMB — SCULPTURE, JOHN GREGORY

INTERIOR DECORATION AND INDUSTRIAL ART DESIGN, ERNEST F. TYLER

MURAL PAINTING, ARTHUR CRISP

Official Notification of Awards

PROGRAM

CLASS "B"—III ANALYTIQUE

The Committee on Architecture proposes as subject of this Competition:

"A FOUNTAIN"

A small town wishes to erect a fountain in the center of its public square, which shall be its dominating architectural feature. The fountain shall be designed with four Corinthian columns supporting arches arranged on a square or circular plan. The columns shall be elevated on a base. The structure shall be crowned by an entablature and roofed with a dome or other motive. In the space thus sheltered, there shall be a small basin or a statue, or both, while arranged about the base may be placed other basins or a series of basins at the will of the competitor. The total height from the ground should not exceed 35 ft.

JURY OF AWARD: H. R. Sedgwick, J. Wynkoop, M. J. Schiavoni, J. A. Gurd, M. B. Stout, F. C. Hirons, H. Sternfeld, G. A. Licht, Mr. Kreesly, A. L. Kocher and E. V. Meeks.

This jury also served as Jury of Award for the Class "B"-III Projet.

Number of drawings submitted—56.

AWARDS:

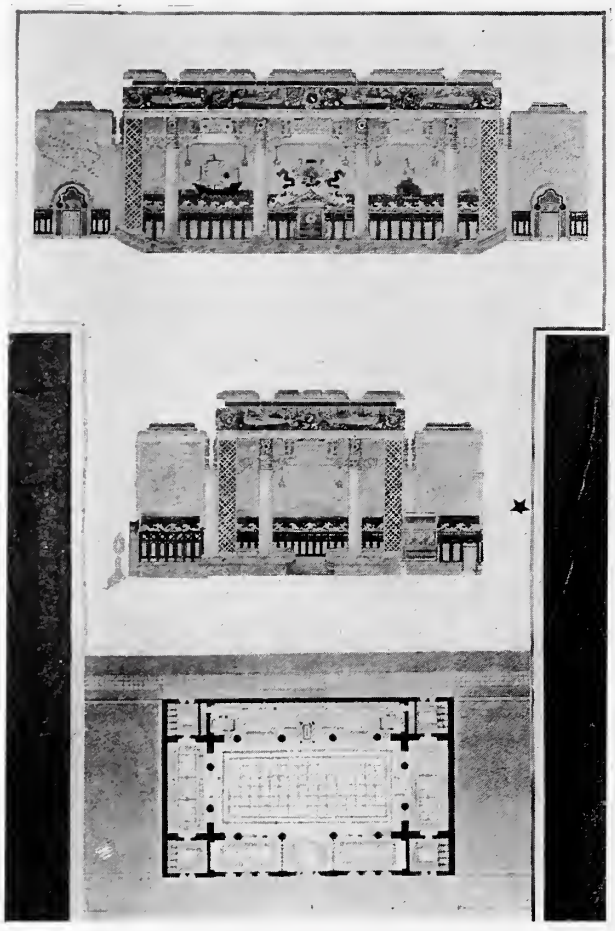
FIRST MENTION PLACED:—P. Goodwin, Atelier Licht, N. Y. C.; A. C. Smith, Yale Univ., New Haven.

FIRST MENTION:—W. F. Frederick, Beaux-Arts Atelier, Washington, D. C.; S. H. Jamison, Carnegie Inst. of Tech., Pittsburgh.

MENTION:—W. T. Spann, A. N. Schaeffer, Beaux-Arts Atelier, Washington, D. C.; C. H. Arras, Cor. J. J. W. Bradney, Buffalo; M. C. Drebin, B. H. Dierks, A. A. Lewis and E. A. Earley, Carnegie Inst. of Tech., Pittsburgh; M. S. McDowell, A. I. Berkow and Eleanor Roche, Columbia Univ., N. Y. C.; T. J. Lane, Catholic Univ., Washington, D. C.; E. Olsen, Atelier Hirons, N. Y. C.; F. F. Williams, Atelier Fowler, Baltimore; H. D. Whitworth, John Huntington Poly. Inst., Cleveland; F. Martinelli, Patron P. J. Rocker, N. Y. C.; H. O. Smith, A. A. Farnham, F. S. Hobbes, P. B. Kapp and R. L. Albert, Pennsylvania State College, State College; M. Capobianco, "T" Square Club, Philadelphia; G. A. Dunwoody, D. K. Frohwerk, H. E. Machamer, Eva McCanles, E. M. Moore, H. T. Flack, Ruth Herthel, H. F. Neville, J. L. Fleming and Myra McLaughlin, Univ. of Kansas, Lawrence; A. H. Corbett, E. R. Ayer, Univ. of Washington, Seattle; Mary H. Holden, Univ. of Texas, Austin; A. C. Weatherhead and H. M. Thompson, Univ. of Oregon, Eugene; E. Penfield, Atelier Wynkoop, N. Y. C.

H. C.:—W. H. Nash, E. R. French, P. F. Dowling and L. Laporte, Catholic Univ., Washington, D. C.; M. V. Falcone, "T" Square Club, Philadelphia.

P. GOODWIN—FIRST MENTION PLACED—ATELIER LICHT
CLASS "B"—III ANALYTIQUE—A FOUNTAIN



C. E. SILLING—FIRST MENTION PLACED—CARNEGIE INST. TECH.

CLASS B—III PROJET—A STEAMSHIP OFFICE

PROGRAM

CLASS "B"—III PROJET

The Committee on Architecture proposes as subject of this Competition:

"A STEAMSHIP OFFICE."

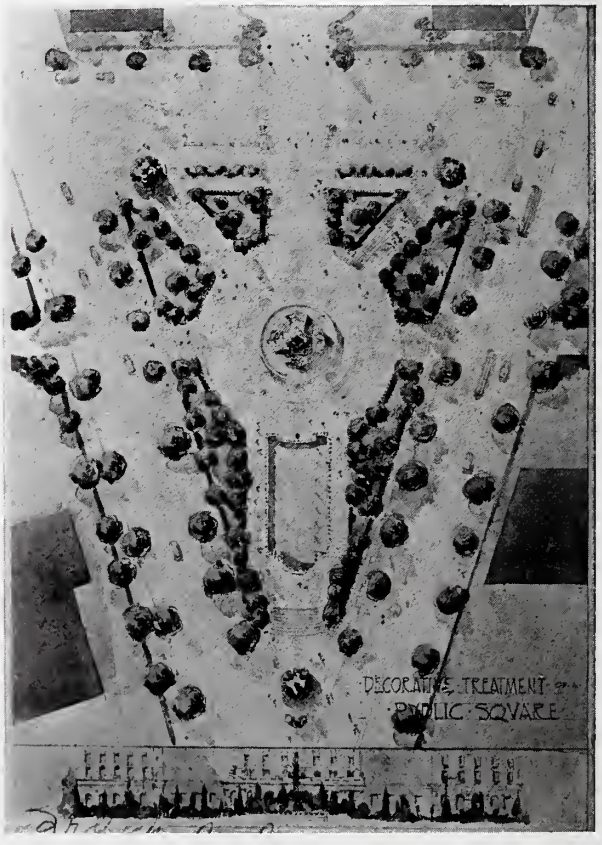
With the new importance of the United States Mercantile Marine, the ocean passenger traffic should be largely handled by our vessels and the near future should see the erection of many offices for the sale of steamship tickets. Such an office requires a room of ample and open proportions, treated with a dignity of architectural design. Mural paintings of distant lands or maps of steamship routes may be included in the decorative composition, to stimulate the passengers' interest in travel.

The accommodation for the necessary clerks is provided back of a counter in full view of the public while a space for the officials in charge of the office is located back of a railing as in a bank. The counter shall be 3 ft. 6 in. in height, and shall be so arranged as to allow a generous length about the public space and ample working area behind. The cashier's counter, which is the only portion caged off, should be prominently and centrally located.

As the steamship office is often used as a mail address by travelers, a lounging and writing space should be arranged both for first and second class passengers. These may be separated from the public space either by railings or grilles or they may be in rooms adjoining the main office room. Retiring rooms with toilet facilities should be placed in connection with them.

The subject of this competition is the design of the Main Office Room with its surrounding requirements. The floor area of the Office Room shall not exceed 8000 square feet and the extreme height shall not be more than 50 feet. The room may be lighted from the top or from two sides or from both.

Number of drawings submitted—56.



D. W. ORR—YALE UNIV.

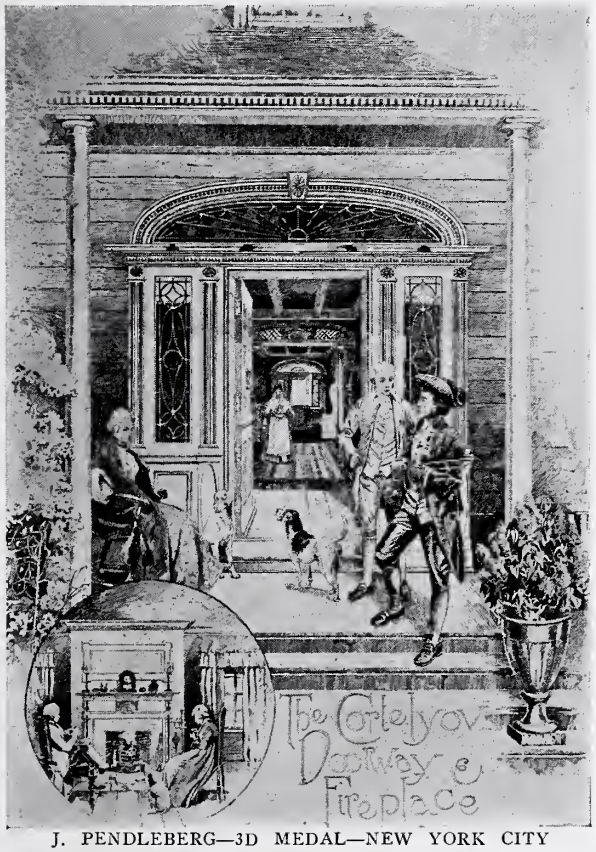
CLASS "A"—IV ESQUISSE ESQUISSE—THE DECORATIVE TREATMENT OF A PUBLIC SQUARE

AWARDS:

FIRST MENTION PLACED:—H. T. Bell Beaux-Arts Atelier, Washington, D. C.; C. E. Silling and S. Lashmit, Carnegie Inst. of Tech., Pittsburgh; W. A. Rutherford, Jr., Georgia School of Tech., Atlanta.

FIRST MENTION:—W. R. Craton, Columbia Univ., N. Y. C.; J. Topnick, Carnegie Inst. of Tech., Pittsburgh; A. L. McGill, Cornell Univ., Ithaca; E. F. Stoeckel, Atelier Hirons, N. Y. C.; C. S. Thateheimer, "T" Square Club, Philadelphia.

MENTION:—K. Carver, B. Hill, Cornell Univ., Ithaca; G. Goodwin, B. A. Pipinos, W. Perkins, R. Finkelhor, R. Bowers, Carnegie Inst. of Tech., Pittsburgh; W. R. Reece,



J. PENDLEBERG—3D MEDAL—NEW YORK CITY
CLASS "A" AND "B". ARCHAEOLOGY. III. MEASURED DRAWING—THE CORTELYOU MANSION

G. Ramey and P. H. Giddens, Georgia School of Tech., Atlanta; J. Lucchesi, Atelier Hirons, N. Y. C.; E. L. Babitsky, John Huntington, Poly. Inst., Cleveland; H. A. Horn, 20 13th Street, College Point, L. I., N. Y.; E. W. Boyer, W. S. Hoffman, Pennsylvania State College, State College; K. Snow, H. R. Diamond, H. H. Davis, Syracuse Univ., Syracuse; E. F. Bircsak, L. F. Soxman, J. L. Benson, E. Pickering, Univ. of Kansas, Lawrence; W. S. Chinn, Univ. of Washington, Seattle; M. Rice, R. B. Thomas and G. H. de Grella, Yale Univ., New Haven; T. F. Price, Atelier Wynkoop, N. Y. C.

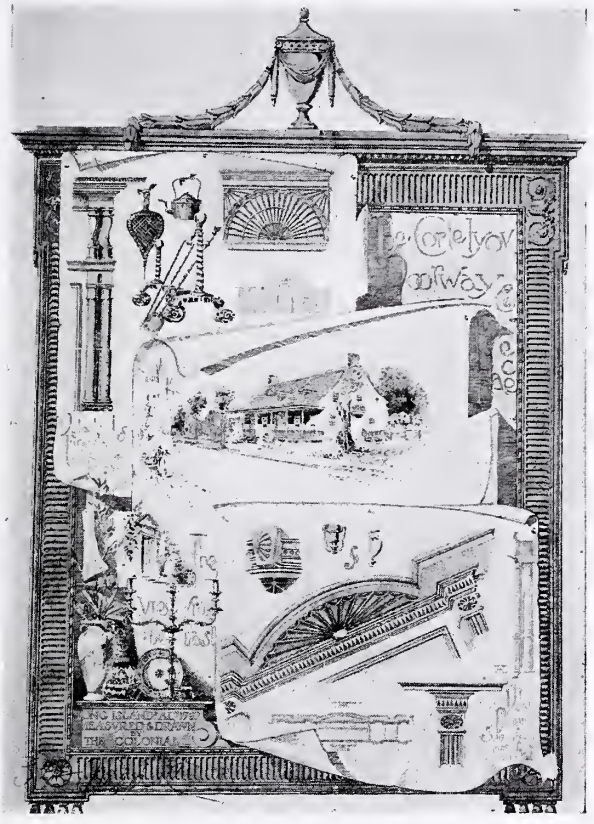
H. C.:—E. C. K. Schmidt, "T" Square Club, Philadelphia; G. Ramerez, Syracuse Univ., Syracuse; P. W. Strickland, W. M. Icenhower, Univ. of Kansas, Lawrence; F. V. Lockman, Univ. of Washington, Seattle.

PROGRAM

SPIERING PRIZE COMPETITION

A Prize founded in memory of Louis C. Spiering, from funds bequeathed by him to the Society and given for the best solution of the fourth Class "B" Esquisse-Esquisse of the season.

PRIZE $50.00



J. PENDLEBERG—3D MEDAL—NEW YORK CITY
CLASS "A" AND "B". MEASURED DRAWING—THE CORTELYOU MANSION

CLASS "B"—IV ESQUISSE-ESQUISSE

The Committee on Architecture proposes as subject of this Competition:

"A VICTORY LOAN BOOTH."

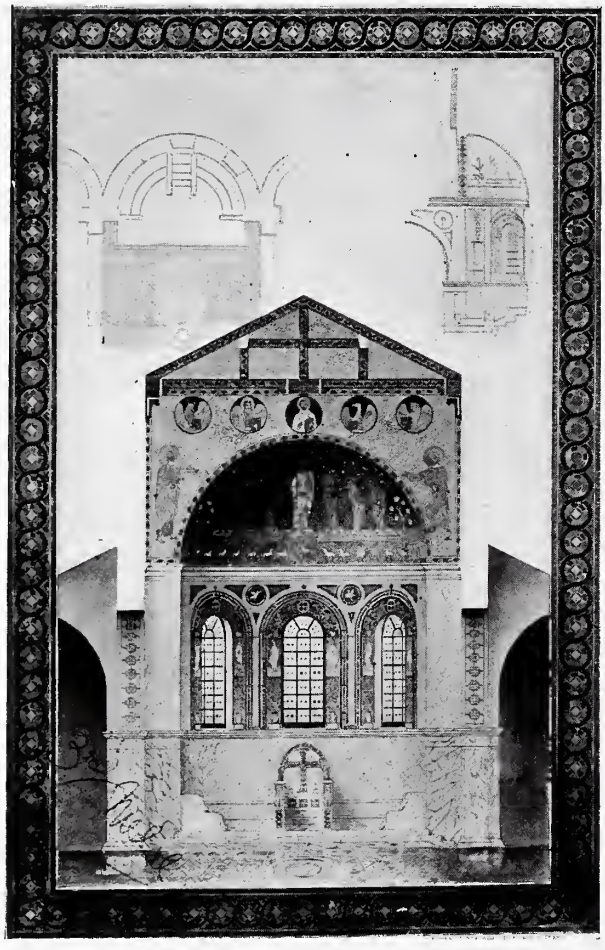
A Victory Loan Booth, for the sale of bonds, is to be built in a public place, facing a busy thoroughfare. It shall be constructed of temporary materials but its character shall be such that its purpose is plainly and adequately indicated. It shall have an open counter space at which the bonds are sold and a rostrum or platform for singers and public speakers. The space devoted to the booth, including the platform shall not exceed 30 ft. by 30 ft.

Number of drawings submitted—7.

AWARDS:

Placed First—Not Qualified for Prize:—R. K. Galbraith, Beaux-Arts Atelier, Washington, D. C.

MENTION:—R. H. Douglas, Carnegie Inst. of Tech., Pittsburgh.



E. E. DAVIS—3D MEDAL—UNIV. OF TEXAS

CLASS "A" AND "B." ARCHAEOLOGY. III PROJET—THE APSE OF AN EARLY CHRISTIAN CHURCH

PROGRAM

CLASS "A"—IV ESQUISSE-ESQUISSE

The Committee on Architecture proposes as subject of this Competition:

"THE DECORATIVE TREATMENT OF A PUBLIC SQUARE."

The site which has been chosen for this Public Square, is in the form of an isosceles triangle. The base of this triangle is 400 ft. and the length on a line perpendicular to the base is 600 ft. The equal sides of the triang'e are bounded by avenues, each 100 ft. wide, which form the point of intersection and continue as a single broad parkway on the bisecting line of the angle of intersection. The base of the triangle is bounded by a street 50 ft. wide. The plot is level.

The arrangement and choice of motives for the decoration of the square are left entirely free. A fountain or band stand with rostrum or both may be used, with statues, vases, balustrades, ramps, etc.

Number of drawings submitted—17.

AWARDS:

THIRD MEDAL:—R. K. Galbraith, Beaux-Arts Atelier, Washington, D. C.; G. A. Anderson, Univ. of Pennsylvania, Philadelphia; D. W. Orr, Yale Univ., New Haven.

MENTION:—E. L. Howard, Cornell Univ., Ithaca; J. W. Hershey, John Huntington Poly. Inst., Cleveland. R. H. Segal, Patrons E. & E. Blum, N. Y. C.

PROGRAM

CLASS "A" AND "B" ARCHAEOLOGY—III PROJET

The Committee on Architecture proposes as subject of this Competition:

"THE APSE OF AN EARLY CHRISTIAN CHURCH."

The Roman Temples were usually planned with a semicircular niche where was placed the statue of the god to whom the temple was dedicated and in front of the niche, which formed the setting for the statue, was the sacrificial altar. This apsidal form first occurs in the temple of Mars Ulter and was later used in many of the basilica, palaces and baths of Imperial Rome. The early Christians, in building their first churches, took as models the pagan temples, placing in the apse the Episcopal throne and the seats for the clergy. A portion of the nave was screened off, forming the choir where the altar was placed. Examples of the arrangement of the bishop's throne are found at Torcello and at Parenzo. The apse is almost always semicircular, sometimes prolonged toward the nave by walls. It is richly ornamented with columns and niches, or more often with wall decorations in marble, fresco or mosaic, and is surmounted by a semi-dome richly decorated in color. Often three apses are found, one at the end of the nave and one terminating each aisle.

The subject of this problem is The Apse of an Early Christian Church. The clear opening between the piers at the end of the nave shall not exceed 130 ft.

Number of drawings submitted—9.

AWARDS:

THIRD MEDAL:—J. W. Brooks, Univ. of Minnesota, Minneapolis; J. K. Smith, J. C. Janney and W. H. Livingston, Univ. of Pennsylvania, Philadelphia; E. E. Davis, Univ. of Texas, Austin.

MENTION:—E. C. K. Schmidt, "T" Square Club, Philadelphia; A. C. Bieber, Univ. of Pennsylvania, Philadelphia; H. I. Feldman, Yale Univ., New Haven.

CLASS "A" & "B"—ARCHAEOLOGY—III MEASURED DRAWINGS.

Number of drawings submitted—2.

AWARDS:

THIRD MEDAL:—J. Pendlebury, 2509 Avenue D, Brooklyn. N. Y.; E. C. K. Schmidt, "T" Square Club. Philadelphia.

Build Now, Urges Willis Polk

WILLIS POLK & COMPANY, Architects and Engineers of San Francisco, whose vast volume of reconstruction since the fire of 1906, places them in a position to speak with authority, give little credence to the popular fallacy, that present high wages and high cost of materials, result in high cost of building, and stoutly maintain that the generally accepted theory, that present building costs are forty per cent above normal and consequently reduce earning capacity, is all wrong. This conclusion is reached by the Polk Company after careful compilation of quantities and accurate estimating of every detail in several proposed buildings now under consideration. They point out that while wages were low and material cheap twenty-five to thirty years ago, buildings like the Mills Building, Merchants Exchange, Crocker Building, and others of that period cost approximately forty cents and more per cubic foot, that recent buildings like the Hobart Building, Insurance Exchange and others, with high wages and high price of materials, cost but from thirty-three to thirty-six cents per cubic foot.

The force of this argument lies in the fact that all the buildings heretofore constructed by Polk's Company were completed at from ten to fourteen per cent less than their original estimates. At the present time they have over ten million dollars of projected work under consideration in their offices. They point out that while small work, the moderate sized residence or flat, now costs from thirty to forty-five per cent more than pre-war-time prices, they have several very attractive investments, which under a twenty year, six per cent bond issue, amortized, would give the investor a one million dollar building for an initial outlay of but two hundred thousand dollars.

The doubting property owner who continues to hold property in the hope that wages will be lower and material cheaper, may as well realize that he labors under a delusion. An improvement representing an investment of one million of dollars that would net fifty thousand dollars per annum, which if delayed for two years in the hope that a break in the market or a possible reduction in construction cost might result in a saving of one hundred thousand dollars, would out of its earnings, if constructed now, more than offset such anticipated savings.

But, says Polk, "There is absolutely no indication that a delay for two years will result in any such savings." Polk quizzically asks the prospective investor if he thinks wages are going down to $1.25 a day for a ten hour day, which was the prevailing wage twenty-five to thirty years ago. Any such hope may as well be abandoned at once as absurd.

On the contrary, Polk opines that the reverse is more liable to be the case and the chances are, that within a few years, hours will be even shorter and wages higher than now.

"But it does not necessarily follow," he said, "that construction costs will be greater." He points out that improved labor saving devices, methods of fabrication and facilities of construction will keep pace with, and offset increased cost of labor and material. "Build now," says Polk.

Current News

American Academy of Arts and Sciences

The 1082nd meeting of the American Academy of Arts and Sciences, the annual meeting for the academic year, 1918-1919, was held at its house, 28 Newbury Street, Boston, President Charles P. Bowditch in the chair and thirty-five members present.

Reports of several important committees on research and publication were received; among these special mention may be made of that from the Rumford committee which, under the chairmanship of Prof. Charles R. Cross of the Massachusetts Institute of Technology, dispenses the income of the Rumford fund for researches in physics, the recipients of grants being distributed all over the United States. Professor Cross took occasion to refer to the serious loss sustained by the committee by the death of Prof. E. C. Pickering, director of the Harvard College astronomical observatory, who has served as a committee member almost continuously since 1869.

The election of new members, which now takes place only once a year, added twenty-five fellows and nine foreign honorary members to the Academy list.

Officers for the coming year were elected as follows:

President, Theodore W. Richards of Harvard University; vice-presidents, Elihu Thomson, Harvey Cushing and George F. Moore; treasurer, Henry H. Edes; corresponding secretary, Harry W. Tyler; recording secretary, James H. Ropes.

Teach Art Through the Children

The City of Pittsburgh has recently gotten down to the heart of art education by opening, in the Carnegie galleries, a children's museum of art. The works of art are chosen for their educational value to children of about fourteen years old. A photographic reproduction of Edwin A. Abbey's mural decorations in the Boston Public Library, showing scenes of the Holy Grail legends, is used for a frieze around the gallery, and below are cases showing the processes of pictorial art, sculpture, metal work, ceramics, textiles, glass, enamel and wood blocks.

These cases are a part of the extension work of the Department of Fine Arts, and will be shown later in the high schools of the city. Their contents include the processes of Japanese wood-cutting and printing, Japanese coloring, Hispano Moresque glazed enamels, better known as luster ware, and Majolica carved ivories; Coptic textiles, tapestries and embroideries of the fourth century; specimens of historic glass work, including Saracenic perfume

sprinklers and Roman amphora; Champleve enamels of primitive type, dating from 1300 B. C., with drawing tools and chisels; stencil plates used by the Japanese to decorate textiles; Javanese resist dyeing; hemp fabrics woven by wild tribes of the Philippines; Flemish primitive landscape painting and cloisonné enamels.

Reproductions of work of noted American sculptors also have a place in the children's museum.

There are to be lectures given to children on these subjects, and prizes are awarded for the essay showing the best application of these lectures.

Housing Campaign to Issue Message

To bring a constructive message productive of harmonious co-operation between the employe and employer, between the industrial manager and the industrial worker; to direct the 60,000 or 70,000 workers in the city of Portland to the important messages of the government relative to labor's place during the reconstruction period, are the purposes of a publication to be issued under the auspices of the "Own-your-home" campaign's committee on industrial plans.

The messages are of a constructive nature by the most prominent men interested in labor's cause, prominent government officials, including a special address by Secretary of Labor W. B. Wilson.

There will also be a special "Own-your-home" message to Portland's industrial population showing the advantages of home ownership in this city.

State Board of Architects Named

Members of the state board of architect examiners, created by an enactment of the 1919 legislature, have been appointed by Governor Olcott of Oregon. They are: W. G. Chandler, Marshfield; M. H. Whitehouse, Portland; Lee Thomas, Bend; J. E. Wicks, Astoria, and W. C. Knighton, Portland.

May 29 is the effective date of the act. In the law it is stipulated that no one may become a member of the board who has not lived in the state and practiced the architect's profession for at least five years previous to the passage of the act. Members of the board serve without pay, but receive traveling expenses when on business of the board. The law allows the board to employ a secretary who need not be an architect, and he shall receive whatever salary is determined upon by the board.

Over 550,000 Buildings to Be Rebuilt in France

There are 550,000 buildings to be rebuilt in the devastated districts of France, according to statistics given the Chamber of Deputies by M. Lebrun, the Minister of Liberated Territories. Three hundred thousand buildings were totally destroyed while 250,000 were destroyed in part.

An Impression of the Convention at Nashville

If it is true that the national convention of the American Institute of Architects reflects the trend of the times in the practice of architecture in this country, then a new era is apparent and the profession is facing changes in procedure almost revolutionary in character.

The fifty-second Convention of the Institute will perhaps be remembered as the beginning of a country-wide tendency vigorously and constructively to meet all activities associated with the practice of architecture; the investigating of educational methods, with a view of broadening and modernizing the teaching of architecture, so as to prepare the student for the particular needs of this country in architecture and construction; ways and means to increase a wider membership in the Institute, thus making it truly representative.

This was the first convention held following the great world war, and the signing of the armistice. The principles for which we fought have been achieved and democracy is the ruling force to guide the destinies of mankind. It was, therefore, natural that the undercurrent of the entire proceedings of the convention should reflect this tendency and aim to correct any method of practice or any attitude of the profession that served a contrary purpose to that of the spirit of the day.

It is difficult indeed to change any system that has become entrenched through habit, convention or education. The architectural profession is not immune from this tendency and hence canons of ethics and rigid codes of practice, which have out-grown their usefulness should be amended or eradicated, as well as any policy that in any respect thwarts opportunity for service.

It is idle to expect the young man struggling for recognition to be limited in his practice by hindrances not recognized by the business world, to which he must become closely allied in his practice. It requires a great upheaval to bring this truth to the consciousness of professions organized and rooted in the past, and with traditions and conventions that have been established and upheld irrespective of changing conditions. Nevertheless the simplyfying of mandatory rules and regulations is in accord with present day methods and is the American ideal.

The convention came together well aware of its great responsibility, and a careful perusal of the discussions and also what was accomplished by resolution and action verify this fact.

The Post-War Committee was given the inspiration and ample means to adequately perform its work, and the Institute as well as the architects of the country can look forward hopefully for suggestions effecting general reorganization plans for the improvement of the entire profession. It is hoped that the spirit which was so discernible in the convention will continue—the spirit of co-operation, of good fellowship and a desire to achieve.

The hospitality of the South and the beauty of spring and of pleasant assocations were no doubt responsible in a large degree for this feeling.

The life and usefulness of the American Institute of Architects, as well as of any activity depends upon vision and progress, and this principle undoubtedly constituted the chief distinction of the fifty-second convention held at Nashville, Tenn.—George W. Maher, *F. A. I. A. In the May Bulletin of The Illinois Society of Architects.*

Fire Investigation and Prevention

In a three years' record of fire losses in Canada, totalling more than $35,000,000, two and one-third per cent of the loss was from fires in residence districts and 97 and two-thirds per cent from fires in congested business districts—public buildings, churches, manufacturing and storage plants, grain elevators and buildings other than dwellings. This emphasizes the fact that fires in residence districts are very infrequent and of small loss compared to the business sections, which are poorly fire-guarded, especially at night. Agitation is growing to hold legally responsible those who are to blame through carelessness for any fire which causes destruction of property and particularly loss of life.

Many fires go on record as "cause undetermined," whereas a careful investigation should be authoritatively made in every case to find out the cause, and publicity should be given to the result of such an investigation. This elimination of fire waste is being agitated more and more in this country as well as in Canada.

Not only would a thorough investigation show that the shingle roof in residence districts is responsible for only a very small percentage of fires, but fires would not so often be thoughtlessly and unjustly attributed to properly constructed wood buildings as is now the case.

Investigation as to causes, the holding to accountability and education for greater precaution would also result in fewer forest fires. The U. S. Forest Service is issuing these pithy statements which are especially pertinent as summer approaches:

"Forest destruction is quick—forest growth is slow."

"Burned timber pays no wages—keep the forest productive."

"A tree will make a million matches—a match may waste a million trees."

"Take no chances with lighted matches, burning cigarettes, or pipe ashes, brush fires or camp fires."

"Are you practicing fire prevention and forest protection?"

Britain's Timber Shortage

Because of the serious shortage of timber supplies for use in the United Kingdom, the British Government has provided for afforesting 1,770,000 acres in a period of 80 years at a cost of about 73 million dollars, 250,000 acres to be afforested in the first ten years. This would be, however, almost a negligible factor in reducing imports.

Prof. Stebbing, head of the Forestry Department of the University of Edinburgh, says: "We found sufficient timber in the country—for the most part of a very inferior quality—to enable us to win the war, but to do that we have seriously depleted the three million acres of woods, all we had standing when the war began. . . . Just before the armistice was signed it had been estimated by the timber supply department that at the then rate of utilization there only remained in this country sufficient softwood timber to carry on to the end of the present year, pit wood for about six years and hardwoods for ten years. The supplies remaining in this country were insignificant when we consider the gigantic amounts required for reconstruction work on the Continent and our own enormous demands."

The shortage is claiming careful consideration from Chambers of Commerce and other responsible bodies in England and one government committee recommends that "immediate steps be taken by the Government for the importation of at least 100,000 standards (nearly 200,000,000 board feet) a month of softwood for all purposes the first year after the war." This same committee reports that there is a shortage of 300,000 working-class houses in England and Wales and 109,000 in Scotland.

Wooden Shingles Permitted

The anti-shingle ordinance prohibiting the use of shingles for wooden roofing and requiring roofs to be made of fire-resistive materials, has been repealed by the City of Dallas, Texas.

Mayor Wozencraft made the following statement in regard to repealing the ordinance:

"The ordinance was passed by the commission in order that the relief which is urgently needed in order that building may not be unwarrantably delayed might be given.

"The commission, and more especially Police and Fire Commissioner McGee, will look into the proposition of extending the fire limits into a secondary fire zone where fire-resistive roofs will be required, and all other regulations complied with.

"But it is not felt that this ordinance repealing the old ordinance should be held up until the details of the plan are completed.

"The commission satisfied itself that the use of fire-resistive materials adds materially to the construction of homes, and created considerable additional expense in the building of modest-priced homes.

England's House-Building Needs

C. W. Barron, writing in the *Wall Street Journal,* says: "England is running a gamut of debt and taxation and labor payments from the National Treasury that means ultimate disaster unless she quickly and solidly rebuilds her entire industrial structure in man, machinery and transportation.

"She is beginning with the essential machine—man. She is considering how to shorten his hours of work, strengthen him physically and mentally and increase his output.

"She has forbidden the raising of house rents upon her laboring classes during the war, yet increases rates and taxes. The result is that the Government must build not only 300,000 homes as planned a few years ago, but must financially assist in the construction of 1,000,000 homes unless her people are to be encouraged to emigrate.

"A million houses at an estimated cost of £600 each means a national construction program that measures in money very nearly to England's pre-war national debt, which was just under $3,500,000,000.

"I asked Lovat Fraser, the English economic and leader writer for the Northcliffe press, if my calculation was correct, and he said he could not dispute it. He added, however, that such a program could not be carried out except over a number of years. He said the first 300,000 homes, which were now being figured upon to cost nearly a billion dollars, would require 6,000,000,000 brick, and the annual brick-making capacity in Great Britain was now only 4,000,000,000.

"I learned from other sources, however, that England is encouraging tremendous imports of lumber and had signed up contracts, of which the public hears nothing, for

timber from around the world—Scandinavia, British Columbia, etc. She is reaching out for timber as she is reaching out for oil, and she will build and sail and defend as never before.

"Lloyd George with his wonderful leadership has given her the keynote, and it resounds in all her constructive and upbuilding plans: 'You cannot maintain an A-1 empire with a C-3 population.'

"The housing construction program begins with an increase in the local tax rate of one penny in the pound. Then the National Government advances money to the local government which, after construction, pays it back as best it can from the penny in the pound tax and the rents. But the return of the money is not so important as provision for sanitation and the safeguards against crowded tenement construction. The law permits only eight to twelve homes per acre, as compared with present construction of fifty.

Building Research

Research is now admitted to be one of the essential parts of reconstruction or speedy progress; the advantage of research is now acknowledged in every industry—except building. Why not in building? Is it because we have achieved the perfect house? Clearly not. During the next few years we shall find new materials, processes and fittings. Just as in the last fifty years we have invented improved roofs, walls, floors, doors, locks, stoves, and lighting, ventilation and drainage, so we shall in the next fifty improve on today's methods. Then why use inferior methods when we could use better ones? If a thousand years ago a few brainy men had been picked to search deliberately to improve building (and other industries) we should have had better buildings five hundred years ago than we have today. During the next few years, says *Building World* of London, we are going to spend millions of dollars on building houses. Is it not mere common sense, is it not wisdom, to spend, say, one million in determining the right kind of house and the quickest way to make it? Isn't research really necessary more in building than any other industry? We must have houses; we must have them now; we know they can be improved. Research is not the builder's business; he can't afford it. Research is everybody's business and nobody's business. It is therefore the Government's business.

Artificial Stone from Mica and Clay

Mr. Chr. Ingvaldsen, of Saaheim, Norway, claims to have devised a process of making a practicable building stone by mixing finely divided mica with a just sufficient amount of clay or other substance of similar properties, to form a coherent mass, which is then shaped into blocks, plates, and other objects of any desired shape and size. These, it is learned, are then fired at a temperature just high enough to fuse the mass, the resulting stone having in general the same properties as natural mica.

If it be desired to produce stone having greater resistance to high temperatures the process is modified as follows: Instead of mica alone, a mixture of equal parts of mica and of crushed quartz, with just enough clay to act as a binder. The stones formed from this mixture are fired at a temperature high enough to secure the fusing of the mica. The result is a homogeneous mass not only highly refractory to heat, but capable of acting as an electric insulator.

Grand Central Palace, New York, to Become a World Trade Mart

One of the biggest enterprises to be embarked upon, having in mind the extension of American commerce in foreign countries, as well as the importation of foreign goods to America, has just been inaugurated in New York City. It is the new proposition of the Merchants' and Manufacturers' Exchange of New York to make Grand Central Palace a great clearing house for world commerce.

On September 30, the United States Government will turn Grand Central Palace back to the Merchants' and Manufacturers' Exchange. For months this great twelve-story building—the largest exposition building in the world—which occupies an entire city block, has been used as an army base hospital. Its evacuation, now taking place, will permit reconstruction of the entire interior so as to make it ideal as a permanent show place for all sorts of manufactured products. The industries will be grouped and permanent exhibits will be made on eight spacious floors, each floor having approximately 60,000 square feet of space. The remainder of the building (the four lower floors) will be utilized for the annual expositions which have made the building famous, such as the Automobile Show, Motor Boat Show, Flower Show, Electrical Exposition, Chemical Exposition, Hotel Men's Exposition, etc.

Permanent exhibits of products of the more important industries will be opened beginning October 15. The Merchants' and Manufacturers' Exchange has established foreign connections for export business in every important city of the world, and manufacturers, jobbers, retail dealers, and the thousands of foreign buyers undoubtedly soon will regard Grand Central Palace as the world's great trade center and will make it their headquarters when visiting New York. Looking forward to this the management will establish clubrooms, conference rooms, office facilities, etc., to increase the foreign buyers' comfort while in the Metropolis.

Never before has there been such a permanent exchange conducted along international lines which will give the American manufacturer an opportunity to come into direct contact with the domestic and foreign buyer. Some of the industries represented will occupy an entire floor. The plans of the Merchants' and Manufacturers' Exchange are decidedly elaborate, and in a number of ways they will afford a service to the manufacturer, jobber and dealer which has never been possible under the usual systems of merchandising.

Through its wide representation in other countries the Exchange will make its proposition known to every foreign buyer before he sails for America and acquaint him with the value of the service of the new enterprise, while in the United States and Canada the fact that the building is so well known leaves no doubt that it will be the mecca of thousands of domestic dealers and jobbers.

Only goods of proved quality and concerns of A-1 repute will be permitted to exhibit. Grand Central Palace, which is a beautiful building in itself and prior to the entry of the United States into the war, housed the largest expositions held in New York, is centrally located and most convenient to all railroads, steamship piers, hotels, theaters, and the shopping district. The march of the world's industrial progress during the reconstruction period, it is believed, will be largely via Grand Central Palace.

Motor Car Methods in House Building

The Ford automobile plant in Dearborn, Mich., is combating its problems by the immediate construction of three thousand houses. Like the machines themselves, these will be built of uniform parts and materials, to save expense and time, and afford the quickest relief to the present housing shortage. A special mill to saw the raw material in uniform sizes is now under construction. Actual construction awaits completion of the mill, but land has been bought and hundreds of lots already laid out.

Iowa Architects Publish Suggestions for the General Public

The Iowa Chapter of the American Institute of Architects, desiring to enlighten the public as to the place which the architect occupies in the general scheme of things, recently published and gave wide circulation to a brochure entitled, "Facts and Suggestions to Persons Interested in Building Operations."

The increased cost of building materials undoubtedly forms a cogent and unanswerable argument in favor of the employment of a competent architect. When clear white pine could be bought for $12 or $15 a thousand, all other materials at proportionally low prices, and skilled labor could be employed for $2 a day—building materials could be used more lavishly than at present. It wasn't so necessary to count board feet, and comparatively little attention was paid to planning.

But with the rapid increase in costs of materials and labor, together with a growing realization of the solid benefits to be derived from the achievement of architectural merit, the architect's services began to receive more consideration.

A little additional care in construction—with trained intelligent consideration of the use of materials with a view to economy as well as attractiveness—may easily save for the owner several times the fee which the architect asks for his services. Then, also, must be taken into consideration the fact that buildings of architectural merit —no matter of what type, or what the use for which they are designed—bring a higher price in the realty market and sell more readily than buildings designed carelessly, without architectural merit or the benefit of careful planning.

One would think that in these days of high building costs every American with enough business acumen to get together sufficient money to pay for the construction of a building, would have learned that an architect is not a luxury—employed to add a few ornamental frills to an otherwise sufficient and pleasing building—but it is a regrettable fact that many otherwise astute persons wholly fail to take into consideration the real value of the architect's technical experience and knowledge. Now that the time has come when America has definitely entered an era of high building costs, owners must understand that building materials are too costly to be used except under the intelligent direction of an expert.

The Iowa Chapter points out that designing a building is an evolutionary process. In order to get the best result, the owner must give the architect his problem, and it is the architect's duty to find the best solution. This can only be accomplished by careful study, coupled to expert knowledge. It is a comparatively simple matter to produce a set of blueprints. It is to be regretted that blueprints fail to convey to the layman any intimation of the deep study and thought that led by various stages to the completed plan.

Origin of the Word "Miniature"

The origin of the "miniature", says an Attleboro, Mass., paper, is a follows: In the golden days of Roman literature, to be a successful author was to be as great as a king, for kings looked to their poets for immortality, as Augustus Caesar did to Horace. Hence it was to be expected that authors would feel their importance and display more or less vanity. One of their weaknesses was to see their portrait painted in artistic fashion in their parchment books. This work was intrusted to artists called "miniatores", that is, artists whose work was largely done in vermilion, a color extracted from cinnabar, and called by the Romans 'minimum". The "miniatores" chose the oval form for their beautiful brilliant portraits on the parchment books, and hence the origin of the term "miniature", a small hand-painted oval or round portrait.

Unsightly Billboards

Billboard advertising has become a recognized feature of business activity in the United States. The boards offer practically the only method of advertising which compels every one to see and read, whether he wishes to do so or not.

In permitting the display of this advertising, the City of New York made it a condition that the operators of the billboards should keep the surroundings free from litter. Inspections made by The Merchants' Association through its Anti-Litter Bureau show that this condition is not always being fulfilled.

Personals

John Kasurin has established an architectural office at 512 Empire Bldg., Detroit, Michigan.

Ray L. Weiriek, Architect, Des Moines, Iowa, has moved his office from 309 C. N. B. Building to 1503 28th St.

Dwight G. Wallace and Alfred K. Kellogg have formed a partnership for architectural practice at 6 North Clark Street, Chicago. Catalogues are requested.

R. A. Bradley & Company, Architects and Engineers, have opened a new office in Scottsbluff, Nebraska, and would be pleased to receive catalogs from manufacturers and material men.

William G. Herbst and Edwin O. Kuenzli announce that they have formed a partnership for the practice of architecture. The firm, now known as Herbst & Kuenzli, maintains offices at 721 Caswell Block, Milwaukee, Wis.

The architectural practice conducted under the name of Arthur Woltersdorf, architect, will be known on and after June 1, 1919, under the firm name of Woltersdorf & Bernhard, architects and town planners.

Byron Sutton, who for twelve years has been engaged in the practice of architecture in the organization of Louis H. Osterhage, has now been admitted to partnership. The firm is located at 30 Second National Bank Building, Vincennes, Ind.

Late News from Architectural Fields

Special Correspondence to THE AMERICAN ARCHITECT

Urges United States to Send Artists to France

A letter urging that a party of American artists and painters be sent to France, to depict the part taken in the war by America, has been written to President Wilson by Albert Eugene Gallatin, who was Chairman of the Committee on Exhibition, Division of Pictorial Publicity, for the Committee on Public Information. Mr. Gallatin would have the pictorial history of the war on exhibition in the proposed $10,000,000 National Soldiers' Memorial in Washington.

His letter is as follows:

Hon. Woodrow Wilson, President of the United States, Paris, France.

Sir: A group of Americans, who realize the importance of art as a national asset, and who are deeply stirred by the example of Great Britain, France, Canada, Italy, and Australia, in sending their best artists to the front to create permanent national records of the war, its heroism, sacrifice, and suffering, have deputed me to send you this letter.

We deplore the fact that thus far very little has been done to bring before present and future generations of Americans the great and inspiring part our country played in the war. We urge that a number of our leading artists be sent abroad immediately to paint from actual observation our historic battlefields, portraits of our army and navy leaders, of our soldiers, the life of our Army of Occupation on the Rhine, the scenes of war, the stupendous results of our efforts in engineering, railway building, hospital equipment, shipping, and all other branches of our war activity.

We also regret deeply that we have missed the opportunity of gaining the services of our greatest painter, Sargent, who has just painted for the British Government a monumental war canvas. It may be too late to paint incidents of warfare, but modern war consists not merely of fighting.

There are still immense fields to be covered if immediate action be taken. We appeal to you, therefore, for approval of such a project. The inspiring Canadian example proves that a national memorial of this kind can be created without the financial, though not without the moral and practical, support of the Government. The success of such a project would mean the presentation to our Government of the finest kind of a war memorial.

Respectfully yours,
ALBERT EUGENE GALLATIN.

Mr. Gallatin said the proposal was discussed recently at a dinner held by artists and critics. While no method of choosing the men for the task had been discussed, it was assumed they would be artists who have shown ability in war artistry. Some of the men whose names were mentioned when Mr. Gallatin first made the suggestion, while he was with the Committee on Public Information, were Childe Hassam, George B. Luks, Paul Dougherty, Henry Reuterdahl, George Bellows, W. J. Glackens, Mahonri Young, and Joseph Pennell.

Wants Investigation of Construction Financing

WASHINGTON, D. C., June 9.—Senator Kenyon of Iowa has introduced a bill to create a commission to investigate and report to Congress on the questions involved in the financing of house construction and home ownership.

The bill provides for an inquiry into existing conditions in the financing, construction and acquisition of homes within reach of people of modest means. The bill will give the commission power to inquire into the effect of present methods in stimulating or retarding the investment of capital in such homes and in controlling the quality, location and cost.

Senator Kenyon wants the commission to visit other countries and report to Congress by January 1, 1920. At that time, they will be expected to make recommendations for legislation. It is proposed to have two Senators and two Representatives on the commission consisting of agents of the Treasury and Labor Departments and two citizens designated by the President, one of whom shall be a woman. With the exception of the Presidential appointees all will serve without pay, the compensation of the salaried commissioners being fixed at six dollars per diem.

To Construct Reflection Pool at Lincoln Memorial

WASHINGTON, D. C., June 7.—Congress has been asked to appropriate $200,000 for the construction of the reflection pool at the Lincoln Memorial here. Landscape architects have devised plans for this project which call for two pools. The reflecting pool will be 2,000 feet long and 160 feet wide. The total cost of the pool is estimated at $350,000.

It is proposed to use the first appropriation for excavation and drainage. The total cost may be increased to $500,000 in event it is found that the soil will force the construction of a water-proof bottom.

Building Supply Ban Lifted in Uniontown

UNIONTOWN, PA., June 9.—Restrictions placed by building supply concerns in Uniontown upon the sale of building material, pending the adjustment of a wage controversy with the carpenters, have been lifted to the extent that supplies may be purchased for repair work. The carpenters recently put into effect a wage scale, increasing from 75 cents to 87½ cents per hour the wages of all carpenters in the Uniontown union. Building contractors promptly refused to accept the scale, and suspended the sale of building supplies until an adjustment was reached.

A pronounced building boom in the city was halted, all new building being suspended by lack of supplies.

Model Town for Negroes

TRUXTON, VA., June 7.—A model town, constructed by the Government exclusively for negroes is now formally open and Truxton, Va., has taken its place on the map as a suburb of Portsmouth.

Built primarily for war purposes to house the employed at the great Hampton Roads naval base, the 224 buildings in the little town will not be sold immediately by the Government, but will be rented at from $16 to $19 monthly. The town is one of the twenty-four housing projects the United States Housing Corporation is rapidly completing throughout the country for the Government. These projects represent a returnable value of more than $25,000,000 and consist of a total of 6,000 houses and sixty-four apartments which by the end of June will be returning $2,500,000 a year in rentals to the Government. Final disposition of the property rests with the Congress.

Truxton covers ninety acres and contains six store buildings which it is proposed to operate under a stock company formed by the tenants.

To Consider Zone System

WASHINGTON, D. C., June 9.—Restriction of building in the District of Columbia is indicated in the bill introduced by Senate Calder last week. He proposed to have a commission appointed to consider the adoption of a zone system for construction of building in the District. This commission will make a report to the Commissioners of the District of Columbia together with their recommendations.

Wage Scale of Trades Identified With New York Building Market

DURING the past six months the largest employer of labor, the Government, has withdrawn from the field. The signing of the armistice, which came overnight, caused the suspension and abandonment of many jobs which would have involved hundreds of millions of dollars and employed hundreds of thousands of artisans. With this work stopped, together with three million troops coming back from Europe, a situation has been created which requires considerable tact in order to be adjusted with the least friction.

The principal trouble has come from the unskilled laborers, those who have had no affiliations with central bodies, and are more or less irresponsible. These men have done much to hamper the building situation. On the other hand the skilled laborer has realized the trouble that has confronted his employer and met him half way. This, to be sure, was in a great measure, so far as the building trades were concerned, due to the fact that prohibitive wage scales made new work impossible. In the adjustment of just how much the wage earner can receive and still permit the builder to make a fair margin of profit, the cooperation has not been confined to the employer and employee by any means. A third factor comes into the field—that of the material dealer and manufacturer.

The manufacturer has been trying to place his goods on a stabilized basis, so that the contractor can figure his job and find out, after his building is under construction deliveries cannot be made at prices that maintained when the operation was started.

The New York Building Trades Association has prepared a table, of which the following is a digest, showing the wage scale in 1919, and the wage scale now in force. It shows the increase obtained by the various trades during this period, which accounts, in part, for the increased cost of building:

In Greater New York, carpenters (shop work) wage scale in 1916, $4.50; 1919, $6.00. All boroughs July 1, $6.25, demanding $7.00.

Bricklayers, in 1916, $6.00; in 1919, $7.00. Laborers, in 1916, $3.14; in 1919, $4.00.

Cement masons, in 1916, $5.30; in 1919, $5.60. Expires Dec. 31, 1919. Class A, in 1916, $3.00; in 1919, $4.00. Engineers (Hoisting Assn.) in 1916, $5.75-$6.00; in 1919, $6.50. Engineers (running pump) in 1916, $4.75-$5.00; in 1919, $5.50.

Painters, in 1916, $5.00; in 1919, $6.00.

Decorators, in 1916, $5.00; in 1919, $5.00. (Varnishers the same.)

Plasterers, in 1916, $6.00; in 1919; $6.50-$7.00. On strike for $7.50. Laborers, $3.50 in 1916; in 1919, $4.50. Demanding $5.50.

Metallic lathers, in 1916, $5.50; in 1919, $6.00.

Electrical workers, in 1916, $5.00; in 1919, $6.00. Expires December 31, 1919. Helpers, in 1916, $2.50; in 1919, $3.00.

Asbestos workers, in 1916, $4.65; in 1919, $6.40. Helpers, in 1916, $2.90; 1919, $3.00.

Plumbers, in 1916, $4.50; in 1919, $6.00.

Steamfitters, in 1916, $5.00; in 1919, $6.00. Expires Jan. 1, 1920. Helpers, in 1916, $3.00; in 1919, $4.00. Expires Jan. 1, 1920.

Elevator constructors in 1917, $5.52; in 1919, $6.80. Helpers, in 1917, $3.52; in 1919, $4.50.

Stone masons, in 1916, $5.00; in 1919, $5.00. Cutters, in 1917, $5.00-$5.50; in 1919, $6.75. September 1, $7.00. Setters, in 1914, $6.00; in 1919, $7.00. Laborers, in 1916, $3.00; in 1919, $3.60. Bluestone cutters, in 1903, $4.40; 1919, $5.00.

Mosaic workers, in 1916, $4.75; in 1919, $5.50.

Tile layers, in 1917, $6.00; in 1919, $6.00. Expires Jan. 1, 1920. Helpers, 1917, $3.25; in 1919, $3.65. Demanding $4.00.

Marble cutters and setters, in 1917, $5.50; in 1919, $6.00. Expires July 1, 1920. Carvers, in 1914, $6.00; in 1919, $6.50. Expires July 1, 1920. Polishers, in 1914, $4.40; in 1919, $4.70. Helpers, in 1914, $3.25; in 1919, $3.50. Bed rubbers, in 1914, $4.95; in 1919, $5.00. Sawyers, in 1917 and 1919, $4.68. Machine workers, in 1914 and 1919, $5.50.

Roofers (composition), in 1917, $3.75; in 1919, $4.75. Slate and tile, 1914, $5.25 to $5.50; in 1919, $6.50. Roof and sheet metal, in 1914, $5.00; in 1919, $6.00.

Housesmiths (structural), in 1916, $5.30; in 1919, $7.00. Finishers, in 1916, $5.30; in 1919, $6.40. Helpers, in 1916, $4.00; in 1919, $5.00.

Houseshorers, in 1917, $4.00; in 1919, $5.00. Helpers, 1916, $3.00; and in 1919, $5.00.

Woodcarvers, in 1903, $3.75 to $5.00; in 1918, $5.50. Workers (per week), in 1916, $18.00.

Freer Loans Stimulate Building

Renewed Co-operation Between Mortgage Institutions and Builders Greatly Aids Construction Boom

FURTHER evidence of renewed co-operation between large mortgage interests and builders, lack of which for some time past has checked the progress of construction on a large scale, a result largely due to efforts made by unscrupulous speculators to place loans unwarranted by appraisals, was a feature of this week's activity in building circles. Although hotly assailed by this type of builder, who claims he will be driven out of business if the plan to force amortization continues, there is sound reason why lending institutions have hesitated in furnishing construction funds on first mortgages as freely as before the war.

The responsibility for an increased cost of lending capital can be directly traced to this condition of mistrust. The scarcity of available funds held by the title and life insurance companies and savings banks after they absorbed such a large part of all Government issues, has made for an expected rate of six per cent, and with it comes a closer scrutiny of all projects on which money is advanced.

It is only a short time ago that the speculative builder could get a bank to accept the appraisal of a broker whose connections might not be of the best, only for the bank to find later than an excessive amount had been loaned on the project. Evidence of this is to be found in many cities where lending companies have had to take over title to considerable property that had been over-appraised to such an extent that the speculator was willing to turn over the property to the company for the face value of the mortgage.

Since the war this state of affairs has undergone a decided change for the better. Additional safeguards have been taken by the mortgage institutions to guard against the reprehensible methods of unprincipled speculators. Appraisals have been put in the hands of competent men, the amortization clause placed in contracts, and other precautions taken to enable operators to judge their equity with more certainty, and allow building to proceed on a more normal basis.

The effect of the feeling of mistrust on the part of the banks in the larger cities was unfortunately reflected in the smaller municipalities with the consequence that the well-intentioned builder, or the man who desires to construct a new home, has had to bear the bonus, and pay the increased rate on loans. The moral hazard in transactions of this nature is as pronounced as in fire insurance, and becomes an important factor in the placing of a loan. It is not just that the small investor shall suffer for the suspicions that are rightfully directed against certain classes of speculative builders who use questionable methods to finance their project and shall have to pay a premium that ordinarily he would not be asked to give.

The banks and builders are now co-operating with the net result of getting construction started on a large scale. The need is for new houses and more new houses and this feeling of confidence makes their construction possible. The thing needed now is action in carrying through the plan. One large New York title company this week reported lending from two to two and one-half millions of dollars in the metropolitan district in May. Other companies similarly active are helping the situation materially.

* * *

A wide variety of construction was noted among projects which came to architects' offices during the week. Theaters had a leading position. Some complaints were heard regarding the difficulty of obtaining sufficient labor and it is expected that the situation will become more acute before the summer is far advanced. Material prices are holding firm, with a tendency upward in lumber and brick.

* * *

A conference of New York members of Congress has been requested by Senator Charles C. Lockwood, chairman of the Joint Committee on Housing of the New York Legislature, who proposes to establish a Federal Reserve Home Bank along lines similar to the Federal Land Bank for farmers.

Senators Wadsworth and Calder have been asked to obtain consideration of this proposal as quickly as possible this session, that the "expected shortage of 30,000 homes in this city may be met at least partially."

Senator Lockwood said that under the legislative committee's plan the Federal Home Loan Bank aims to give to present and prospective home owners the same advantage as is given to farm owners by the Federal Land Bank, which exempts from taxation the 5 per cent bonds issued against farm mortgages.

"The exemption from Federal taxation of the mortgages on homes or holdings in mortgages up to say $4,000, so that mortgage money can compete in the money market with Government and other securities which are now non-taxable, more liquid and give a larger net return.

"Exemption from Federal taxation of the bonds issued by the New York State Land Bank, which was incorporated several years ago by the Legislature, which issues bonds secured by mortgages deposited with the State Comptroller of New York, but which has been unable with its 4½ per cent taxable bonds to compete with the 4¾ per cent and other Government non-taxable securities, and the 5 per cent tax-exempt farm loan bonds, and such other and further measures by which they think Congress can aid the situation by stimulating construction of houses."

* * *

WASHINGTON, D. C., June 2.—That prices will not soon drop is the prediction of authorities on all sides. The Federal Reserve Board in its May bulletin says: "The business community has given up the thought that it may profitably await a further considerable reduction in prices and is now contenting itself with the development of trade along lines dependent upon at least the temporary maintenance of existing levels." The review also says that though prices of a few basic commodities have fallen slightly, these declines have not yet been effected in retail prices. "What is now happening," it adds, "seems to indicate that business will, after a period

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Department of Architectural Engineering

Second Report on the Work of the Underwriters' Laboratories*

By the Committee of the American Institute of Architects

TO THE MEMBERS OF THE AMERICAN INSTITUTE OF ARCHITECTS: For the information of those who may not be informed it should be stated that, at the last convention of the American Institute of Architects, the undersigned committee was appointed for the purpose of observing tests made on building materials and equipment at the Underwriters' Laboratories at Chicago, and reporting to the architects such data and results of these tests as might be of value.

The ultimate object of the Institute in doing this was to bring about a diminution in the annual fire loss of property and a decrease in the number of casualties and deaths by fire, by arousing the interest of the architects in those subjects and inducing them to make their buildings more fire resisting and more certain to afford safe exit for the occupants in time of fire.

The reason that the fire loss is so enormous and the number of casualties and deaths by fire so great in this country is because our buildings have been built with little or no consideration of the means to prevent these things.

No one who reads the annual records of the great losses sustained can fail to account for the greater number of them on any charitable basis, except that the people who are responsible for many of those buildings must have been ignorant of all fire prevention provisions or utterly devoid of any proper realization of their great necessity.

THE WHOLE SUBJECT of fire prevention, judged from the basis of the enormous annual losses, is a most fitting subject for National legislation and complete control, but in the absence of that, the only avenue left open for accomplishing any comprehensive reform seems to be by appeal to the people, and of course the most available way to reach them is through the architects who build their buildings.

There is no appeal that can possibly be made which should be received with as much earnest consideration as one made for the saving of human lives and the avoidance of the destruction of property, and that is exactly what this one is.

The effectiveness of an appeal such as this, is usually impaired by the belief on the part of most people that all of these great fire losses are the necessary and natural result of accidents that are bound to occur in spite of all reasonable efforts to prevent them.

Then in connection with this belief comes the final comforting thought, justifying the dismissal of the whole subject from the mind and conscience of these people, that we have fine fire departments with high stepping horses and smart motors, amply able to put these fires out, and back of all this, in case losses do occur, are the rich insurance companies who are fully capable of setting all things to rights and making full amends to all those concerned, so in this manner the average person disposes of the whole subject and the annual losses keep mounting upward and the property owner and not the insurance companies pay every dollar of these losses eventually in the increased rates of insurance.

To awaken these people out of their lethargy and to bring them to a realization of the fact that they

*This report is published in THE AMERICAN ARCHITECT in response to a request by the Committee of Architects and by the Underwriters' Laboratories. The original edition has been exhausted and copies of the report, as originally published, can no longer be supplied by the Architects or the Laboratories. "Calls for copies of the report," the Chairman of the Architects' Committee writes, "are coming not only from all over the United States, but also from Europe and even from as far away as Japan and India."

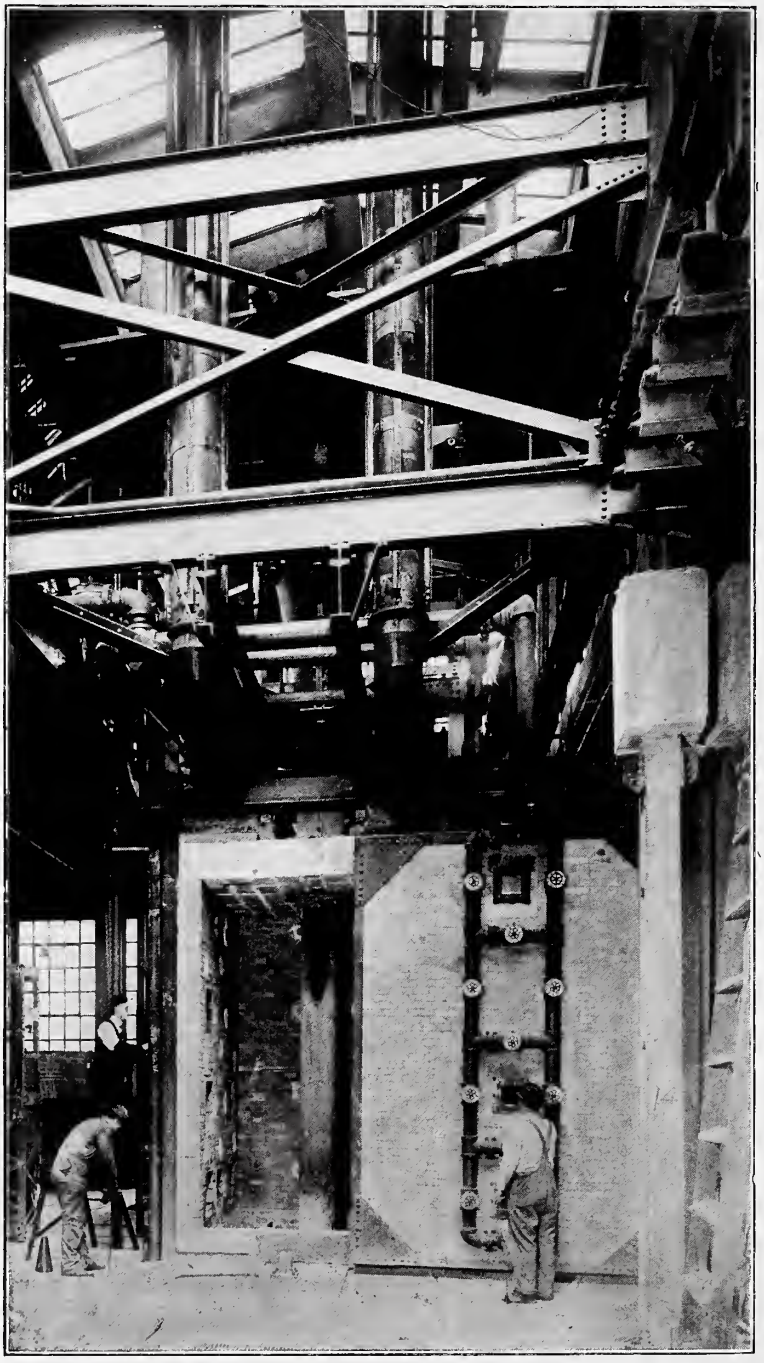
have one of the worst records for fire losses of any nation on earth becomes really a public duty of every one who has a knowledge of the subject and particularly the architects who design these buildings are largely responsible for whatever fire resisting qualities they may have.

In these days especially when the whole nation is struggling to economize and to stop every needless waste, these losses seem all the more regrettable when measured with the great needs of the war sufferers abroad.

Would it not startle the most irresponsive and indifferent person to realize that in 1916 we burned up enough property in this country to house and make comfortable most of the destitute people in France, who have been driven from their homes by the war? Two hundred and eight million dollars is the value of buildings so destroyed according to the approved statistics.

Would it not discourage and rightfully disgust those good people who have been trying to help feed the poor Belgians, if they knew that from May to October of last year $12,000,000 worth of food that we know of was destroyed by fire?

Could it reasonably be expected to awaken the conscience of the speculative builder or the indifferent owner if he were to know that last year 1,332 people were burned to death and 5,280 injured by fire in this country?



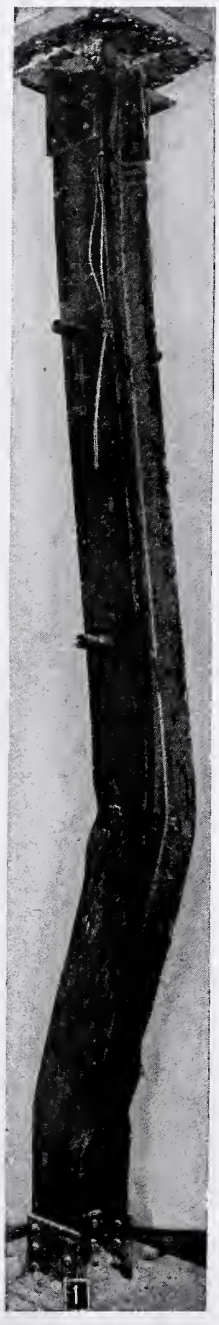
The great furnace erected for testing columns.

It would be a useless and undesirable thing to relate these things in this reproachful manner if it were true that nothing could have been done to prevent them or at least to diminish the number of them. It is of course impossible from the statistics to determine how many of them might have been prevented, but the most startling and convincing evidence of it all is, that this country has charged up against it every year more loss and destruction of property by fire, and more injuries and deaths by the same cause in proportion to our population than almost any other country in the world. Some nations have only half the fire losses proportionately, that we have, others only one-third and some even as low as only one-quarter as many. The statistics on these things are authentic and there is no possible conclusion to draw other than that the people of this country are far below the average in preservation of its property from damage or destruction by fire and safeguarding of its people

from injury or death by the same cause.

It has grown to be a custom among architects to incorporate in their buildings only those safeguards against fire which the particular community in which they practice requires, or if these requirements happen not to be sufficient to secure a low insurance rate, it may be that minimum insurance requirements will govern. At any rate, strange as it may seem, it is seldom that any architect when planning his building adds anything to it not required by the law or the insurance companies that might save it or its occupants in time of fire.

(A)



(B)

(C)

In the face of these awful annual losses it seems clear that the architect should not have to be forced to save his buildings from fire, but he should realize that he is in a position if he will only take advantage of it to do more than anyone else, in making our future buildings safer and better to live in and occupy and much less destructible by fire than they are now. If the architect when he plans and designs his building would only give more thought to how a fire might be stopped or retarded when once started and how all the occupants might find safe and trustworthy means of exit, many a life might be saved that would otherwise be lost and the fire and casualty lists of this country would gradually and surely diminish until they would compare favorably with any nation in the world.

Every Architect therefore is appealed to by the American Institute of Architects, to make a special study of each new problem for the purpose of providing safe exits and all possible resistance to fire, whether the law or the insurance authorities require it or not.

For the purpose of assisting the architects in this most worthy endeavor, there has been included in the Structural Service Department of the Journal of the American Institute of Architects a most complete and up-to-date list of all the literature and authorities on this subject. Any architect can secure with little or no expense full information of all those features and equipments of buildings that have been found by experience to be most effective against fire. In addition to this all the information and data which the Underwriters' Laboratories have been gathering for years from their tests and experiments are open and free to the architects if they will only use them.

Column Tests. Among the tests which the

One of the round-headed windows which stood up excellently after a severe fire and high pressure water test.

Laboratories have been making recently are two which are of very great importance to the architects. They are the tests on building columns and new designs of fire retardant windows. Realizing that the fate of a building and often its occupants depends upon how well the columns supporting it will resist the effects of fire, the tests of columns have been made the most scientific and complete of any that have ever been undertaken. The United States Bureau of Standards, the Associated Factory Mutual Fire Insurance Companies, the National Board of Fire Underwriters and Underwriters' Laboratories decided to combine forces and try out and settle once and for all by real fire tests the relative merits of all kinds of building columns. The question of the relative merits of fireproofing for columns came up after the Baltimore fire and the San Francisco earthquake, and was discussed throughout the country by the press and leading magazines. It is now being settled by carefully prepared scientific methods. Over two years ago the preparations were begun and all the different kinds of columns and all the various ways of fireproofing were carefully considered with the view of selecting for a test a full representation of all the different types. Accordingly 100 specimens were selected, and the work of testing started about a year ago, as soon as preparations for the work had been completed. Among those made during this year were the metal unprotected types of columns, which it is intended to describe in this report, in rather a brief manner and leave the more complicated fireproof columns for a more complete subsequent report. It is planned to provide the architects ultimately with a table of records and data so that they may at once select any kind of a column for any sort of a building with full and definite assurance of what it would do in case of a fire.

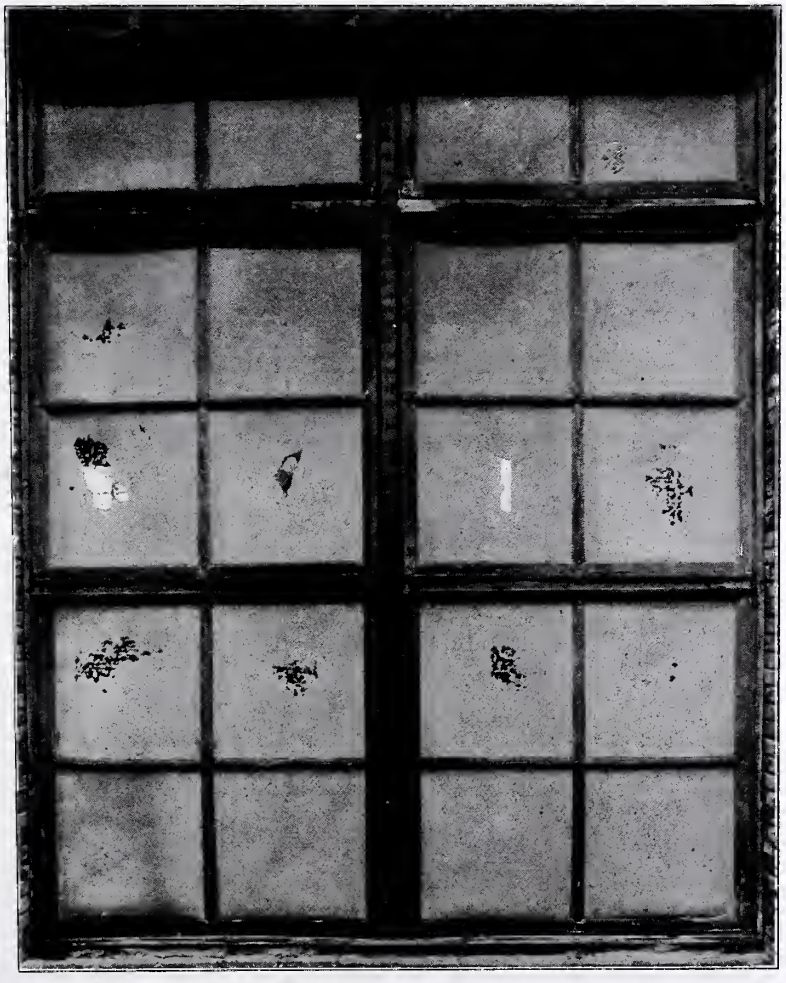
In order to prepare for the testing of these columns under the same conditions that would exist in a building, a great furnace was erected that would take a column 12 feet high and impose upon it during the test a load of 256 tons. The furnace was built for applying a maximum heat of 2300 degrees F. Provisions have been made for measuring temperature of furnace and test column and for measuring the deformation and deflection of the latter. Means have also been provided for applying streams of water under pressure to the heated column. Of the unprotected metal columns tested, 3 were of cast iron and 8 of various combinations

A new type of fire window without any muntins, approved for certain locations.

of steel shapes. The cast iron columns stood up longer than the steel columns although the failure was more abrupt and complete. The temperature was raised gradually to about 1300 degrees F. at 10 minutes and 1500 degrees at 30 minutes. The cast iron column (A), shown in the illustration, (page 831), failed in 34 minutes and 13 seconds while one of the steel columns (B) failed in 11 minutes and 10 seconds and another (C) in 19 minutes and 13 seconds. The illustrations show the condition of the cast iron column and the two steel columns after the test.

These tests on the unprotected metal columns show how quickly they will fail and cause the building to collapse even in an ordinary fire, thus proving conclusively that unless the architect takes the precaution to fireproof such supports his building may collapse even in a fire of very short duration. The great difference in the endurance between these columns and the protected types became at once apparent in the tests, and when the tables and data are finally completed for all of the tests, the resistance to fire of the various kinds of fireproofing for columns will be fully determined.

Fire Windows. The tests of newly designed fire windows established certain facts not previously known which has enabled the Laboratories to put their approval and seal on certain windows which the architects will undoubtedly be very glad to utilize instead of the ones formerly used for certain locations. This test has demonstrated that for certain exposures the architects need not provide for great wide fireproof mullions between units of these windows, but instead of that in certain locations may use mullions as narrow as two inches wide, thereby increasing light 75 per cent and doing away with wide mullions which were in some cases very objectionable features.



New type of fire window and transom having only a 2-in. mullion which tested out satisfactorily.

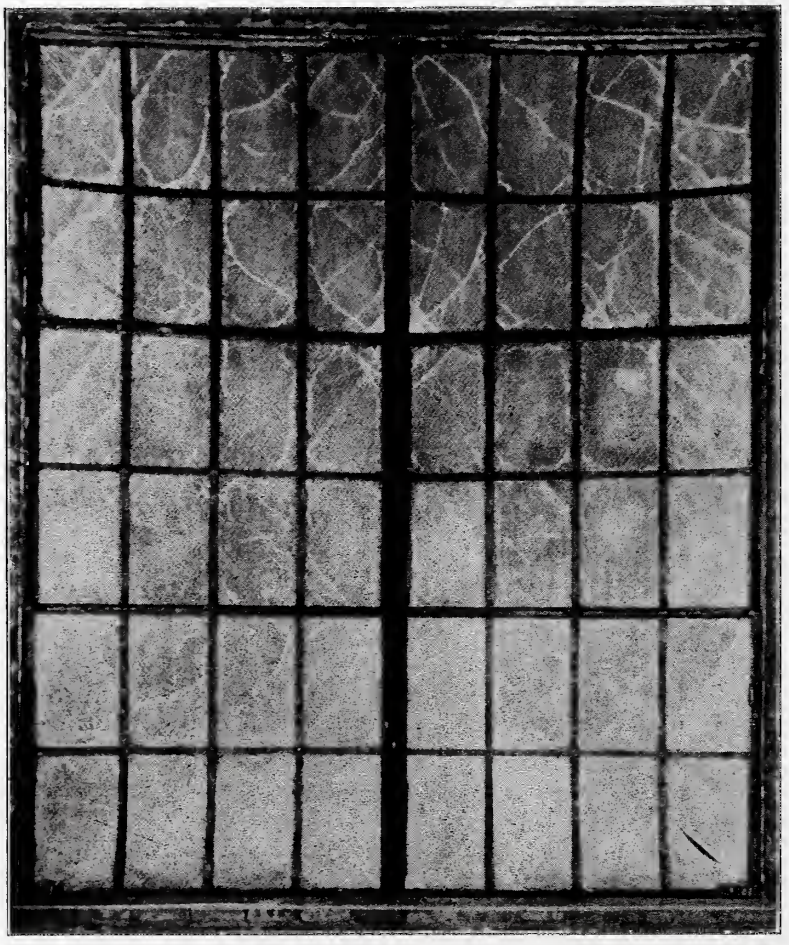
They will also be glad to know that certain windows have been approved for certain locations, in which there may be no mullions used at all and where one entire single sheet of glass may be used in the sash. The illustrations show in a limited way several varieties of these new types of windows which came through the fire with unexpected satisfactory results. The limits of the size of these windows and the area of the glass and the various details of the construction may all be had in detail by application to the Laboratories. It is probable that later on all the information concerning all of the different types of fire windows may be tabulated and sent to the architects in convenient form for their ready reference in determining the kind of windows to select for any situation.

In the next report of this committee it is the intention to present a complete report with all of the important data and conclusions reached by the Laboratories in regard to the relative merits of all the various columns which they are now testing.

Respectfully submitted,

THE COMMITTEE ON THE WORK OF UNDERWRITERS' LABORATORIES,

ELMER C. JENSEN,
H. WEBSTER TOMLINSON,
GEORGE C. NIMMONS, *Chairman.*



Large type of fire window with 2-in. mullion listed after a successful test.

Present Status of Industrial Lighting Codes*

Part III

By G. H. Stickney

Switching and Controlling Apparatus

THIS provides for the location of controlling switches so that at least pilot or night lights may be turned on at the main point of entrance.

Some commissions have considered it important that watchmen and others should be able to go about safely without lanterns, while others believe that the carrying of a lantern is sufficient. The former certainly has advantages, but may in some instances be unnecessarily expensive.

It would appear that the rule in this form is satisfactory on the assumption that an industrial commission would make exceptions where unnecessary hardship is shown.

Enforcement

Attention has been called to the readiness and willingness of the industries to comply with commission regulations, if they are understood.

Other limitations of the code have already been discussed, but none of these has presented more of an obstacle than the fact that many of those by whom the regulations must be applied are not versed in the principles of light and illumination, and have but little idea of the qualities and quantities necessary for the definition of lighting conditions.

Every effort has been made to simplify the rules and make them understandable to others than engineers. Some of the commissions have included simple definitions of terms used. Some have attached explanatory treatises and articles on methods of designing lighting installations. But there is still a need for more popular education. The possibilities of rendering the codes more definite and accurate in the future depend in a considerable degree on such education.

Undoubtedly the commissions can take care of their inspectors, but the small manufacturers, foremen and others responsible for the construction and operation of industrial lighting installations need assistance.

The codes and their appendixes will undoubtedly provide effective mediums, but the help of those professionally related to the lighting practise is needed. It is earnestly hoped that the individual members of the American Institute of Electrical Engineers and the Illuminating Engineering Society will inform themselves regarding the principles of the code specification and not only offer constructive criticism but also help in the educational effort of applying the regulation.

Conclusion

The author is inclined to look with apprehension upon laws or regulations emanating from the professions whose business they affect most directly. There has sometimes seemed to be a tendency in such legislation to favor the profession. Such tendencies are presumably more due to the professional viewpoint or prejudice than to any intent to be unfair.

Having been connected from the first with the committees responsible for the illuminating engineering features, it is only fair to say that the danger of prejudice has been anticipated and carefully guarded against.

Especial care was exercised in the make-up of the committees and the solicitation of criticism, not only to represent the viewpoint of every phase of illuminating and other engineering, but also the light user and light purchaser. The engineer, the scientist and the practical constructor and operator were all included.

On the other hand, it is even more dangerous to legislate regarding such a technical subject without the guidance of the profession. In lighting we have numerous examples of such legislation as, for example, in the headlight laws for railways and automobiles. Many of these laws are not effective or reasonably enforcible, their meaning is not clear, while they not only impose unnecessary hardships, but have in some cases prescribed a dangerous rather than a safe condition.

The industrial lighting codes, besides avoiding both of these dangers, have been so formulated as to encourage uniform action throughout the various States of the Union. The continuation of the code development along the present lines is therefore of importance not only to those directly interested in the electrical and illuminating phases, but to the country as a whole.

In discussing the codes an attempt has been made to emphasize the principles involved rather than the details. Changes in details may be expected, but any considerable change in principles seems unlikely. No one is more conscious of the limitations of the code in its present form than the illuminating engineers who have been active in its development, but all who have had anything to do with the work

*Continued from issue of May 28, 1919.

regard it as a valuable working instrument. The author feels safe in saying that they consider it highly important to any State that it be adopted and actively applied as soon as possible. The greatest possibility for future development is through the experience and popular education following its enforcement.

The author has tried to avoid the expression of personal opinion as far as practicable. He has sometimes found it desirable to express his understanding of the views held by committees and their members, but this has been informal and unauthorized and should be so understood.

He herewith acknowledges with thanks the helpful assistance in the way of comment and criticism of Mr. L. B. Marks and Professor C. E. Clewell, to whom perhaps more than to any other individuals we are indebted for the initiation of these constructive regulations.

The author also acknowledges the assistance of Mr. J. A. Hoeveler and others.

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Analysis of Statically Indeterminate Structures by the Slope Deflection Method

UNDER the above title the Engineering Experiment Station, University of Illinois, Urbana, Ill., have issued Bulletin No. 108, giving the derivation and application of formulas for solving problems involving statically indeterminate stresses. Among the cases analyzed are the following:

Girders having restrained ends, and continuous girders.

Two-legged rectangular bents, with legs of both equal and unequal length.

Two-legged Trapezoidal bents.

Skeleton construction framework with rigid connections.

Three-legged bents.

The use of statically indeterminate structures in recent years has grown rapidly and many new types of structures have been evolved. With the use of riveted connections in steel frames and the development of monolithic reinforced concrete structures of all sorts, it often happens that statically indeterminate stresses cannot be avoided. On the other hand, structures are frequently made of an indeterminate type for the purpose of securing economy of material. Rational methods of design will do much to inspire confidence in the reliability and economy of such structures, thus insuring their more widespread use.

It is felt that the treatment of statically indeterminate structures given in this bulletin will be helpful in giving information regarding such structures. The method has been explained in sufficient detail to enable the designing engineer to use it in the solution of his particular problems. It is believed that the fundamental principles can be quickly coordinated with the ordinary principles of mechanics so that the more complex problems and even the simpler ones may be studied from a new viewpoint.

Building Material Market Reports

(*Continued from Page 828*)

of initial readjustment in prices, proceed upon a level not far removed from that established during the war."

At the solicitation of the Information and Education Service of the U. S. Department of Labor, J. J. Arnold, vice-president of the First National Bank of Chicago, has made a statement on "Inflation and Prices" in which he says it is futile for industry to wait for pre-war commodity prices and everything should be done to encourage resumption of peace business, the production of new wealth being absolutely essential for the reduction of costs.

Mr. Arnold suggests that the United States use the interest paid by foreign countries on their loans for a "rehabilitation fund" to be spent in Europe, which would mean that for the period of time required for the rebuilding of Europe we would be loaning funds without interest. He thinks it would pay to do this, both in terms of friendship and, in the long run, in dollars and cents.

* * *

(*From Our Special Correspondent*)

CHICAGO, ILL., June 9.—Financial and industrial leaders in this city are predicting the biggest building boom in history to follow the signing of the peace treaty and the actual declaration of peace. They hold that pressure behind the resumption of all activities on a peace-time basis is such that many of the former causes for hesitation have disappeared, and are becoming more and more convinced that the one great move to restore confidence and start business and industry in volume is the finis of the greatest world's war.

Steel manufacturers from every district in the country attending a meeting of the American Iron and Steel Institute, in Chicago, predicted that the mills would be operating 100 per cent of capacity before Fall.

Elbert H. Gary, chairman of the United States Steel Corporation, has made the flat prediction that steel production for this year will exceed all records. He held brief for all business in saying, "It is time that industry and enterprise in the United States shall be encouraged and protected instead of attacked, interrupted, and destroyed."

Mr. Gary said that whether the United States was to retain its financial, commercial, and industrial leadership depended "upon the attitude of our own people in official or private life." He added, speaking on behalf of the steel interests:

"We will do our part."

While the steel interests "have not always been exactly right in some, and perhaps in many particulars," he asserted, their intentions were good.

There are "things to be done" by legislative and administrative departments of the Government which are necessary to the protection of the nation's industries, Mr. Gary said, adding that other nations would do everything to see that private enterprise received protection, and American laws and rules should operate similarly.

"It is time that industry and enterprise in the United States shall be encouraged and protected instead of being attacked, interrupted, or destroyed," he declared. "Our nation, now the leader financially, commercially, and industrially, may be continued in this position or compelled to occupy a lower place, depending upon the attitude of our own people in official or private life, or both.

In the Calumet district the rolling mills just at this time are working two hours a day and some of the blast furnaces are down. Officials say the demand shows some improvement, but that what is now needed to bring about normal conditions is the signing of the peace treaty.

Late Quotations in Building Material Markets

(Price quotations now current on building materials and supplies as quoted by dealers and jobbers for delivery in New York and Chicago follow. The quotations set forth are placed before readers of THE AMERICAN ARCHITECT to afford an accurate review of market conditions rather than for use as a basis for actual purchase. They will not only provide knowledge of the exact state of the market as to items quoted, but will also present a basis to judge conditions as affecting co-relating materials. Items marked (*) indicate an advance over last week, while those marked (†) record a decline. Other prices did not fluctuate during the week.)

BRICK	New York	Chicago
Face brick (delivered on job):		
Common (Delivered at job in Borough of Manhattan only), per thousand	$17.85	$12.00
Rough red	29.00	40.00
Smooth red	26.00	40.00
Rough buff	32.00	40.00
Smooth buff	32.00	40.00
Rough gray	38.00	42.00
Smooth gray	40.00	42.00
Colonials	24.00	30.00
BROKEN STONE		
(Delivered on job):		
1½ in. per cu. yd.	$3.25	$2.35
¾ in. per cu. yd.	3.25	2.35
BURNED CLAY		
(Delivered on job)		
Block partition:		
3 in., per sq. ft.	.13†	.10
4 in., per sq. ft.	.15†	.11
Chimney tops:		
12 x 12 for 8 x 8 flues	$3.50	$2.25
Flue lining:		
4½ ft. x 13 ft., per lin. ft.	.24*	.12
4½ x 8½, per lin. ft.	.18†	.16
8½ x 8½, per ft.	.24*	.16
8½ x 13, per ft.	.54*	.20
13 x 13, per ft.	.46*	.28
8½ x 18, per ft.	.54*	.32
13½ x 18, per ft.	.70*	.42
18 x 18, per ft.	.90*	.55
Wall coping (double slant):		
8 in., per lin. ft.	.16†	.14
12 in., per ft.	26†	.18
18 in., per ft.	.54*	.30
Wall coping (single slant):		
8 in., per lin. ft.	.16†	.14
12 in., per ft.	.26½	.30
18 in., per ft.	.54*	.30
(Corners and angles four times the price of one foot of coping the same size.)		
Hollow Tile		
(Delivered at job, in New York below 72nd St.)		
2 x 8 x 12 partitions, per 1,000 sq. ft.	$70.15	....
3 x 12 x 12 partitions, per 1,000 sq. ft.	102.00	$67.90
4 x 12 x 12 partitions, per 1,000 sq. ft.	114.75	72.50
6 x 12 x 12 partitions, per 1,000 sq. ft.	153.00	99.60
8 x 12 x 12 partitions, per 1,000 sq. ft.	....	135.80
10 x 12 x 12 partitions, per 1,000 sq. ft.	....	167.50
12 x 12 x 12 partitions, per 1,000 sq. ft.	....	194.60
2 x 12 x 12 split furring, per 1,000 sq. ft.	63.75	....
CEMENT		
Per bbl. in 15 cent bags (Rebate 60c. per bbl. for bags)	$3.25	$2.80
COPPER SHEETS		
At the mill, hot rolled, 16 oz. base-price, per lb. (From jobber's warehouse add 2 to 3 cents. Cold rolled add 1c. per lb. to hot rolled.)	22½c.	22½c.
CORNER BEAD		
Per foot	.05	.05
FIBRE		
Per bushel	.30	.30

(*Continued on Page 836-B*)

Late Building Material Prices

(*Continued from Page 836-A*)

GALVANIZED SHEETS

	New York	Chicago
Nos. 18 and 20 gauge, per lb	$6.12	$6.12
No. 26	6.42	6.42
No. 27	6.57	6.57

GLASS

(Discounts from manufacturer's price lists)

Single strength, A quality, first three brackets	77%	77%
Single strength, B quality	77%	77%
Double strength, A quality	79%	79%
Double strength, B quality	81%	81%
Plate—up to 5 sq. ft	82%	....
Plate—over 5 sq. ft	84%	....
Plate—up to 10 sq. ft	...	83%
Plate—over 10 sq. ft	...	82%

GRAVEL

1¼ in. (Borough of Manhattan only), per cu. yd	$2.75	$2.35
¾ in. (Borough of Manhattan only), per cu. yd	2.75	2.35

GYPSUM

Plaster Board:

Delivered at job, Boroughs of Manhattan and Bronx.

27 x 28 x 1	35c.	....
27 x 48 x ½	30c.	....
32 x 36 x ¼	21c.	25c.
32 x 36 x ⅜	21c.	26c.
32 x 36 x ½	23½c.	....

Plaster Blocks:

Delivered at job, Boroughs of Manhattan and Bronx.

2 in. solid, per sq. ft	7½c.	....
3 in. solid, 12 x 30, per sq. ft	10½c.	....
3 in. hollow	10½c.	10c.
4 in. hollow	12½c.	11c.
6 in. hollow	17½c.	....

LATH

Eastern spruce, per thousand	$6.80*	....
No. 1 white pine, per thousand	....	$6.50
No. 1 hemlock, per thousand	....	6.00
No. 1 yellow pine, per thousand	6.40*	5.25

LEAD

American pig, per lb	5¼ to 5¾†	5¼ to 5¾†
Bar, per lb	7½ to 8	5½ to 6¼†

LIME

Common, 300 lb. bbls., per bbl	$2.50	$1.40
Finishing, 300 lb. bbls., per bbl	3.70	....
Hydrated, in paper bags, per ton	17.25	17.00

LUMBER

(Retail prices per M, delivered.)

Yellow pine, 2 x 4	$55.50*	$47.00
Yellow pine, 2 x 6	52.00*	45.00
Yellow pine, 4 x 4	62.50*	52.00
Yellow pine, 8 x 8	72.50*	52.00
Yellow pine, 12 x 12	59.00*	57.00
Yellow pine, No. 1 boards, 1 x 6	60.25	53.00
Yellow pine, No. 1 boards, 1 x 12	62.50	56.00
Yellow pine, B and better flooring (plain)	62.00	57.00
Yellow pine, B and better flooring (quartered)	74.50	70.00
Douglas fir, 6 x 6 to 12 x 12	63.50*	63.00
Douglas fir, 12 x 14 to 14 x 14	....	64.00
Norway pine, 2 x 4	60.00	50.00
Norway pine, 2 x 12	65.00	57.00
Hemlock, 2 x 4	47.50	46.00
Hemlock, 2 x 12	51.00	48.00
Oak flooring, 13/16 quartered white	165.50*	130.00
Oak flooring, 13/16 quartered red	138.00*	123.00
Oak flooring, 13/16 plain white	96.50*	90.00
Oak flooring, 13/16 plain red	96.50*	90.00
Maple flooring, 13/16 clear	88.00*	89.00
Maple flooring, 13/16 select	84.00*	75.00
Maple flooring, 13/16 No. 1 factory	74.50	62.00
Mahogany, 1" F. A. S.	300.00	300.00
Quartered oak, 1" F. A. S.	180.00	150.00
Plain oak, 1" F. A. S.	120.00	100.00
Red gum, 1" F. A. S.	87.00	75.00
Sap gum, 1" F. A. S.	56.00	60.00
Chestnut, 1" F. A. S.	87.50	80.00
Poplar, 1" F. A. S.	130.00	110.00
Birch, 1" F. A. S.	70.00	70.00
Spruce, random 2"	52.00	50.00
Spruce, wide	62.50	60.00

METAL LATH

Under 100 sq. yd., per sq. yd	40c.	40c.

MORTAR COLORS

Red, per lb	.05	.05
Brown, per lb	.05	.05
Chocolate, per lb	.05	.05
Black, per lb	.05	.05

OILS

Linseed, city, raw	$1.90	$1.90
Linseed, boiled, advance, per gal	.01	.01
Out of town, American seed at	1.90	1.90

PAINTS

Leads: American white, in oil, kegs; lots over 100 lbs.	14c.	14c.
White, in oil, 25-lb. tin pails; add to keg price	¼c.	¼c.
Red, bbl., ½ bbl. and kegs; lots over 100 lbs.	14½c.	14½c.
Dry Colors: Red Venetian, American, per 100 lbs.	$2.75 to $5.00	$2.00 to $5.00
Metallic Paints: Brown, per ton	$24.00 to $32.00	$24.00 to $32.00
Red, per ton	24.00 to 30.00	24.00 to 32.00

PIPE

6 in. and heavier	$52.10	$51.80
4 in.	55.70	54.80
3 in.	62.70	61.80

(and $1 additional for Class A and gas pipe.)

(Discounts to jobbers for carload lots on the Pittsburgh basing card; freight rates from Pittsburgh to New York, and also from Pittsburgh to Chicago, in carloads, per 100 lbs., are 27c.)

Wrought: Steel: Butt Weld		
Black, ⅛ to 3 in.	50½%	57½%
Galv., ⅛ to 3 in.	24 to 44%	41 %
Iron:		
Black, ⅛ to 1½ in.	29½ to 39 %	39½%
Galv., ⅛ to 1½ in.	2½ to 23½%	23½%
Steel: Lap Weld		
Black, 2½ to 6 in.	53½%	53½%
Galv., ⅛ to 3 in.	41 %	41 %
Iron:		
Black, 2½ to 6 in.	34½%	34½%
Galv., 2½ to 6 in.	21½%	21 %

PLASTER

Neat wall cement in 15 cent bags, per ton	$20.30	$18.50
Finishing plaster	24.00	21.00

PUTTY

In bladders, per 100 lb	$6.25	$6.25
In 1-lb. to 5-lb. tins, per 100 lb	6.75	6.75

RADIATION

(A further discount, effective April 4, of 15% on direct radiators, 12½% on wall radiators, and 10% on steam and hot water boilers is announced. This approximates a drop of 36% on radiators and 33% on boilers from prices in effect before the 1st of January, 1919.)

Chicago reports a 57% discount on standard heights.

REGISTERS

Cast iron semi-steel or steel, in black or white japan or electro plate and small faces and borders	40%	40%
Wall frames	40%	40%
Large faced, 14 x 14 in. and larger	60%	60%
Base board registers	40%	40%
Base board intakes	40%	40%
White enameled goods	15%	15%
Solid brass or bronze goods, except grilles	net	net
Grilles in black and white japan or electroplate in cast iron, plain lattice design—smaller than 14 x 14 in.	40%	40%
—Less than 14 x 14 in.	60%	60%

REINFORCING BARS

High carbon steel from mill	$48.50	$49.50
Medium steel from mill	48.50	49.50

ROOFING MATERIAL

Tarred Paper: 1-Ply, per ton, per roll, 108 sq. ft	$63.00 to $65.00	$65.00
2-Ply	95c.	95c.
3-Ply	1.23 to 1.30	1.30
Rosin sized sheathing	per ton 60.00	60 00

Corrugated roofing, galvanized, 2½ in. corrugation, over flat sheets, 30c. per 100 lbs.

SAND

Mason, per cu. yd	$1.80	$2.25
Torpedo, per cu. yd	1.80	2.35

SHINGLES

Red cedar, 5 to 2, clear, per thousand	$8.70*	$6.50
White cedar, extra star, A star, per thousand	7.50*	5.50

SLATE ROOFING

Pennsylvania:	F.O.B. cars, Quarry Station	F.O.B. Chicago
Best Bangor	$7.75 to $9.00	$10.20 to $11.45
No. 1 Bangor Ribbon	6.75 to 7.25	9.20 to 9.70
Pen Argyl	7.25 to 8.00	9.70 to 10.45
Peach Bottom	10.00 to 12.50	12.45 to 14.45
No. 1 Chapman	7.25 to 8.25	8.70 to 9.95
Vermont:		
No. 1 Sea Green	3.50 to 6.75	5.95 to 9.20
Unfading Green	5.50 to 9.25	8.30 to 11.05
Red	12.00 to 20.00	14.80 to 22.80
Maine:		
Brownsville, U'f'g Black, No. 1	11.00 to 12.00	14.10 to 15.10
Slaters felt, 30 lb. roll	1.75	.....
Slaters felt, 40 lb. roll	2.25	.....

SPIRITS TURPENTINE

Per bbl.	.66½	.66½

STONE SCREENINGS

Lime, per cu. yd	$2.35	$2.35

STRUCTURAL STEEL

Beams and channel, 3 to 15 in., per lb	2.45c.	3.47c.
Beams and channel, over 15 in., per lb	2.45c.	3.57c.
Angles, 3 to 6 in	2.45c.	3.47c.
Zees and tees	2.45c.	3.47c.
Steel bars, half extras, from mill	2.35c.	3.47c.

STUCCO

In cloth, per ton (white, mixed)	....	$21.50

BUILDING NEWS

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it. Our sources of information are believed to be reliable, but we cannot guarantee the correctness of all items. Persons in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

ALABAMA

BESSEMER, ALA.—Jefferson County Board of Revenue is having plans revised by H. B. Wheelock, Steiner Building, Birmingham, for completion of courthouse.

BIRMINGHAM, ALA.—Dr. W. H. Mixon is having plans prepared by W. H. Rayfield & Co., Birmingham, for building at Walker Street and Eleventh Avenue for Roosevelt Memorial School for Girls, 72 x 140 feet. $50,000.

MONTGOMERY, ALA.—An ordinance providing for the $50,000 bond issue has been passed, which is to provide for building a city hospital as a memorial to the Montgomery soldiers and sailors.

ARKANSAS

BLYTHEVILLE, ARK.—Contracts will soon be let for constructing a new court house here to cost $200,000.

EARLE, ARK.—Earle Special School District will erect $100,000 high school. Address District School Trustees.

FORT SMITH, ARK.—T. T. Reddiek & Son, this city, was awarded contract for constructing school building to cost approximately $32,000.

FORT SMITH, ARK.—First Methodist Church purchased site at N. Fifteenth and B Streets, and is reported to erect $150,000 building. Address: The Pastor.

LITTLE ROCK, ARK.—W. F. Ault was awarded contract for constructing a two story brick business building at Second and Scott Streets. $25,000.

CALIFORNIA

EL CENTRO, CAL.—Channel Commercial Co., 900 East First Street, Los Angeles, purchased site on Commercial Street, and plans to build three story, 140 x 150 ft., reinforced-concrete warehouse. Architect not selected. $75,000.

FRESNO, CAL.—San Joaquin Baking Co., San Benito and P Streets, plans to build two story, 145 x 240 ft., concrete plant on Lanu and Los Angeles Streets. F. D. Bradford, Manager.

LA VERNE, CAL (Mill Valley P. O.)—La Verne Orange & Lemon Growers Assn. plans to build packing house here. $30,000.

LOS ANGELES, CAL.—Anheuser-Busch Co., Ninth and Pestalozzi Streets, St. Louis, Mo., plans to convert bottling plant on Main and Albion Streets, here, into ice factory and cold storage plant and build ice cream factory adjoining same. G. E. Wells, Alexandria Hotel, Engineer.

SAN FRANCISCO, CAL.—Plans have been prepared by John Reid, Jr., City Architect, for the construction of a new building for the health department on the southwest corner of Grove and Polk Streets in the Civic Center.

STOCKTON, CAL.—J. Kroyer Mfg. Co. is having plans prepared by F. V. Mayo, Architect, 512 Farmers & Merchants Bank Building, for group of fireproof faetories and 50 x 90 ft. office on Cherokee Lane. $100,000.

COLORADO

DENVER, COL.—A bond issue of $40.000 was voted upon for the building of a gymnasium and assembly room as an addition to the present high school.

DENVER, COL.—Work will soon be started for the construction of the new $400 000 to $500,000 State Administration Building, to be constructed on the Porter Corner, Colfax Avenue and Sherman Street. Wm. N. Bowman, Architect.

GRAND JUNCTION, COL.—Miller & Smith is having plans prepared by E. G. Groves, Architect, 222 Foster Building, Denver, for 100 x 125 ft. garage.

LAMAR, COL.—Davis & Pollard, Lamar, Col., have contract for constructing addition to the high school building and a gymnasium. $40,000.

LONGMONT, COL.—The Great Western Sugar Company is planning the construction of a $50,000 dormitory for the use of the employees of the company.

CONNECTICUT

BRIDGEPORT, CONN.—City appropriated $150,000 to build garage on Washington Avenue. J. A. McElroy, City Engineer.

BRIDGEPORT, CONN.—Maloney & Krokstedt, Architects, 925 Main Street, soon receive bids for building two story triangular shape reinforced-concrete garage, on Fairfield Avenue. $50,000.

BRIDGEPORT, CONN. — Fletcher-Thompson Inc., engineers, 1089 Broad Street, soon receive bids for building two story, 65 x 190 ft., steel, and one story, 26 x 26 ft., reinforced-concrete factory, on Benham Avenue, for Nichols Underwear Corp., James Street and Linen Avenue. $100,000.

BRIDGEPORT, CONN. — Fletcher-Thompson, Inc., engineers, 1089 Broad Street, soon receive bids for building one story, 65 x 100 ft., and one story, 60 x 65 ft., brick ice plants; also one story, 100 x 150 ft., reinforced-concrete cold storage building on Seaview Avenue for Peoples Ice Co., care F. E. Ballard, 44 Wood Avenue. $150,000.

HARTFORD, CONN.—Ahearn & Welch have been awarded contract for constructing the new public market building on Ferry Street and the Boulevard. $90,329.

HARTFORD, CONN.—L. Herrup, 1052 Main Street, purchased site at 90 Pearl Street, and plans to erect furniture building. Architect not selected. Cost to exceed $50,000.

MANCHESTER, CONN.—Plans have been completed for the construction of a memorial hospital. Smith & Bassett, Hartford, Conn., Architects. $80,000.

NEW HAVEN, CONN.—Triangle Garage Co., Inc., care C. A. White, 1024 Chapel Street, having plans prepared for one story, 51 x 56 x 43 x 58 ft. service station and garage and 20 x 28 ft. office, brick and steel, on Middletown Avenue and Ferry Street.

NEW LONDON, CONN.—Sidney Mfg. Co., 420 Bank Street, purchased site on Shapeley Street, and plans to build four story factory. $60,000.

FLORIDA

GREEN COVE SPRINGS, FLA.—Clay County Board of Education plans to call election on $50,000 bonds to erect school building.

JACKSONVILLE, FLA.—Bids will be received some time in July for constructing a steel bridge here having a concrete flooring and being 2800 ft. in length, 40 ft. wide with a 30 ft. roadway, and to cost approximately $900,000. Harrington, Howard & Ash, Kansas City, Mo., Engr.

ST. PETERSBURG, FLA.—City Commissioners are considering calling election on $90,000 bonds for improvements to include $50,000 addition to City Hospital, $25,000 to build concrete bridge across Booker Creek, $10,000 to construct concrete bandstand and comfort station in Williams Park and $5,000 to erect comfort station at Citv Hall; plans for latter prepared by W. S. Shull, St. Petersburg.

GEORGIA

AUGUSIA, GA.—Plans for the following buildings are being prepared by G. Lloyd Preacher, Architect, Masonic Building, Augusta, Ga., and Healy Building, Atlanta, Ga.:

Theater for Lenox Amusement Co., Augusta, Ga., $60,000.

Terminal Hotel for Heyman & Baron, Augusta, Ga., $75,000.

Randall Hotel, Randall Hotel Co., Augusta, Ga., $350,000.

Residence for Mr. J. J. O'Connell, Augusta, Ga., $7,500.

Additions and remodeling Baptist Church, Waynesboro, Ga. $20,000.

Additions and remodeling Trinity Methodist Church, Augusta, Ga., $25,000.

Additions and remodeling residenee for Mr. Wallace Pierce, Augusta, Ga., $5,000.

Grocery warehouse for Heath, Bolster & Turner, Augusta, Ga., $30.000.

Additions and remodeling store for L. Sylvester & Sons, Augusta, Ga., $7,500.

Additions and remodeling store for Mr. Sam Goldberg, Augusta, Ga., $5,000.

Auto sales building for Weathers & Gerrard, Augusta, Ga., $50,000.

Auto sales building for Mr. G. Morton Jones, Augusta, Ga., $30,000.

Apartment building for Mr. C. W. Schley, Augusta, Ga., $15,000.

Apartment building for Mr. J. C. Fargo, Augusta, Ga., $16.000.

Residence for Mr. W. E. Ashley, Ellenton, S. C., $12,000.

Residence for Mr. L. P. Wilson, Barnwell, S. C., $10,000.

Residence for Mr. R. C. Holman, Barnwell, S. C., $10,000.

Residence for Mr. Hermann H. Hahn, Aiken, S. C., $10,000.

Hospital for Edgefield County Medical Association, Edgefield, S. C., $50,000.

School, De La Howe Industrial School, Willington, S. C., $60,000.

Store building for Mr. C. E. Perry, Ridgeland, S. C., $12,000.

Auto sales building for Mr. J. M. Holley, Aiken, S. C., $20,000.

Residence for Mr. Hal D. Still, Blackville, S. C., $20,000.

Bank for Farmers & Merchants Bank, Johnston, S. C. $30,000.

COLUMBUS, GA.—City Board of Education is having plans prepared by T. F. Lockwood, Murrah Building, Columbus, for grammar school building; stucco, one story; eight rooms; tile roof; steam heat. Roland B. Daniel, superintendent of schools. $22,000.

FORT VALLEY, GA.—City voted $39,000 bond issue to include $15,000 for school annex and $24,000 for paving; plans for school provide eight to ten rooms; brick and concrete; slate or other fireproof roof; pine floors; steam heat.

MACON, GA.—C. A. Odom of the Odom Ice Cream Co. has announced that additions will be made to the Odom plant to cost $150,000.

ILLINOIS

CHICAGO, ILL.—J. L. Kraft Bros. Cheese Co., 359 River Street, plans to build six story, 120 x 275 ft., reinforced-concrete and brick factory, on Oak and Crosby Streets. Architect not selected. $500,000.

CHICAGO, ILL.—Natl. Tea Co., 2715 West North Avenue, is having plans prepared by J. B. Rohm & Son, Architects, 138 North La Salle Street, for six story, 120 x 125 ft., mill construction warehouse, on Oak and Crosby Streets. $275,000.

CHICAGO, ILL.—Morris & Co., Union Stock Yards, let contract for building nine story, 150 x 350 ft., reinforced-concrete, cold-storage warehouse, on Forty-fourth and Loomis Streets, to R. C. Wieboldt, 1534 West Van Buren Street. $1,000,000.

CHICAGO, ILL.—Bunte Bros., 730 West Monroe Street, is having plans prepared by Schmidt, Garden & Martin, Architects, 104 South Michigan Avenue, for two story, 75 x 125 ft., reinforced-concrete garage, at 700 West Monroe Street. $75,000.

CHICAGO, ILL.—Peacock Estate is having plans prepared by Mundle & Jensen, Architects, 39 South La Salle Street, for two story, 250 x 325 ft., reinforced-concrete and brick factory and auto service station, on Thirty-seventh and Princeton Streets. Packard Motor Car Co., 2357 South Michigan Avenue, lessee. $650,000.

EAST ST. LOUIS, ILL.—A new theater will be erected here on Collinsville Avenue, near St. Louis Avenue, at $150.000.

LOCKPORT, ILL.—A special election will be held for the purpose of issuing bonds to the amount of $20.000 for the construction of an addition to school building. G. W. Webster, Architect.

ROCK ISLAND, ILL.—Plans for the new school building to be constructed at Eighteenth Avenue and Thirty-second Street are being prepared by Cervin & Horn, Architects, and will be known as the Washington School.

INDIANA

BLOOMINGTON, IND.—Showers Bros. let contract for building brick, steel and reinforced-concrete plant to H. K. Ferguson, 6523 Euclid Avenue, Cleveland. Plans to include machine shop, assembly building, cabinet shop, tin shop, welfare building, dry kiln, power house.

DELPHIA, IND.—Jos. C. Sink, Township Trustee, will construct addition to schoolhouse at the Camden School, Camden, Ind. Chas. Brossman, Architect, Merchants Bank Building, Indianapolis, Ind.

FT. WAYNE, IND.—Wayne Knitting Mills Co. is having plans prepared by Lockwood. Green & Co., Engrs., 38 South Dearborn Street, Chicago, Ill., for four story, 85 x 150 ft., brick and reinforced-concrete knitting mill. $120,000.

HUNTINGTON, IND.—The business men of Huntington will construct a new hotel in the city to cost $250.000.

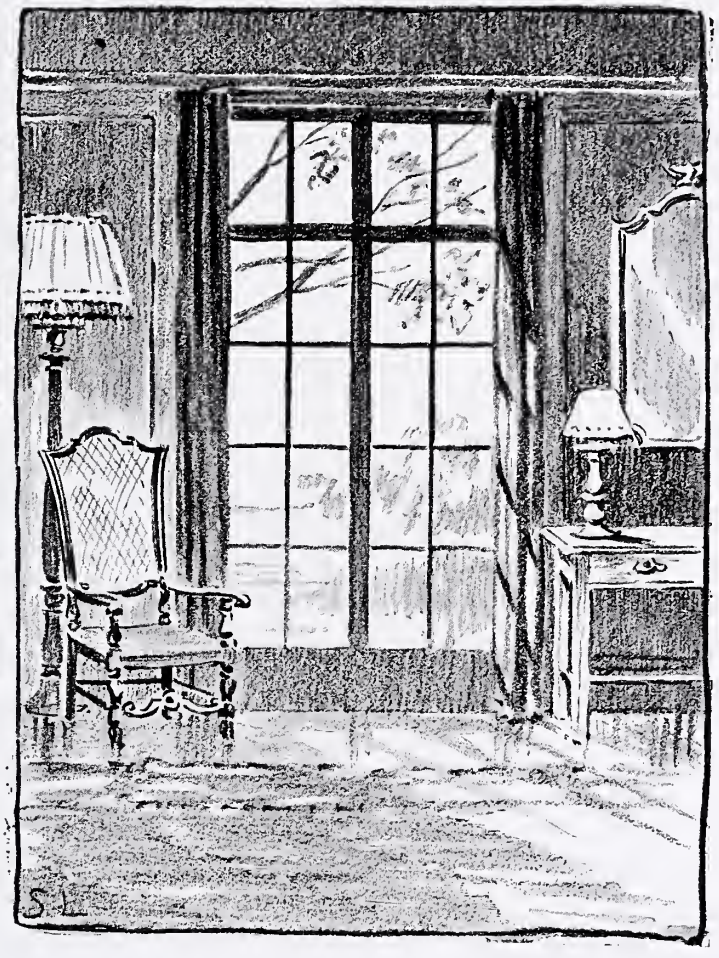
HUNTINGTON, IND.—Caswell-Runyan Company is contemplating doubling the capacity

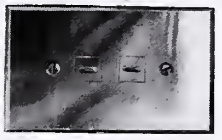
Double door flush receptacle for special plug. When plug is inserted two doors in the plate close, leaving nothing exposed but a thin porcelain flange.

This receptacle also requires a special plug restricting the use of devices to outlets similarly equipped. The ordinary push button switch plate is used to cover the outlet

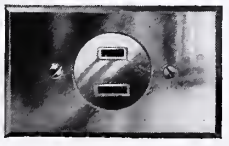
"Standard" flush receptacle for single plug.

"Standard" flush receptacle for two plugs.





Disappearing door flush receptacle requires special plug. Contacts are always protected; when plug is removed the doors seal the openings.



Flush type receptacle for special plug. Has 25-ampere capacity.

Single door receptacle for non-separable screw base plugs. Door may be closed when plug is removed.

G-E Reliable Wiring Devices *can be furnished by any reputable Electrical Contractor*

More Convenience Receptacles Needed

CONVENIENCE receptacles for attaching vacuum cleaners and other household helps are frequently overlooked on the average wiring job.

Enough receptacles, preferably double ones, properly placed, means not only a degree of convenience and satisfaction far above the added cost but the possibility of higher rentals or easier sale.

Every room should have several of these outlets and they should be placed for maximum convenience with respect to probable use. Consideration of the likely position of furniture avoids awkward locations.

The name General Electric Company on an electrical device is a guarantee of quality backed by over a quarter-century's experience in the generation, transmission, distribution and application of electricity.

General Electric Company

General Office Schenectady, N.Y.

41 21

of the present building and constructing an office building on the north side of East Franklin Street. $100,000.

INDIANAPOLIS, IND.—G. & J. Tire Co., 549 East Georgia Street, is having plans prepared by Lockwood, Green & Co., Engrs., 38 South Dearborn Street, Chicago, Ill., for five story, 100 x 400 ft., factory. $950,000.

INDIANAPOLIS, IND.—The E. G. Spink Company is contemplating constructing an eight story, 121 apartment hotel building, here. $600,000.

NEWCASTLE, IND. — Cornell Engineering Company, 2601 Cornell Avenue, Indianapolis, Ind., was awarded general contract for constructing two buildings for boys and a small hospital for Colony No. 2 for epileptics. $59,000.

IOWA

DAVENPORT, IOWA.—The M. L. Parker Company are contemplating constructing a new building at the northwest corner of Second and Brady Streets. $500,000.

DAVENPORT, IOWA.—Plans are completed for the construction of mammoth addition to the well-known Coliseum dance hall on West Fourth Street. $80,000.

DAVENPORT, IOWA.—The Burrell Engineering and Construction Co., Chicago, Ill., was awarded contract for constructing a huge rectangular building, containing 22 tanks for the storage of grain. $30,000.

DAVENPORT, IOWA.—McCarthy Improvement Company was awarded contract for constructing the new Nurses' Home at Mercy Hospital. $110,300.

DES MOINES, IOWA.—The legislature has proposed the erection of a Temple of Justice to house legal departments of the State here. $1,000,000.

DES MOINES, IOWA.—Plans are being prepared for the contemplated addition to the Iowa Lutheran Hospital to cost approximately $200,000.

DES MOINES, IOWA.—Construction of a $150,000 five story structure at W. Ninth Street and Grand Avenue for the Outlet Department Store is planned for the immediate future.

MARSHALLTOWN, IOWA.—The Marshalltown State Bank will build on two Main Street lots a building to cost from $100,000 to $125,000.

SIOUX CITY, IOWA.—Plans are being prepared for the construction of the new War Eagle Hotel at Sixth and Pierce Streets, to cost $1,000,000. Richards, McCarty & Bulford Co., Columbus, Ohio, and Butler & Arnold, Sioux City, Iowa, Architects.

STORM LAKE, IOWA.—Estimates are being prepared for the construction of a new Masonic Temple at Storm Lake, Iowa. Marten & Sutherland, Architects. $100,000.

KANSAS

BELOIT, KAN.—Board of Education will construct a high school building. W. H. Sayler, Kansas City, Mo., and Frank A. Slack, Beloit, Kan., Associate Architects.

ELDORADO, KAN.—A new auditorium will be constructed at the corner of Start Street and West Pine Avenue to cost $100,000.

HIAWATHA, KAN.—Wolfley Automobile Co. plans to build one story, 55 x 140 ft., brick addition to garage. $50,000.

SALINA, KAN.—The First Christian Church has decided to build a new $50,000 building this summer.

KENTUCKY

LOUISVILLE, KY.—The Louisville Industrial Foundation is contemplating constructing a ten story factory loft building, with railroad connection, a central lighting and heating plant and shipping department. $1,600,000

LOUISVILLE, KY.—O'Connor Estate, care J. J. Gaffney, Architect, is having plans prepared for three story, 64 x 204 ft., steel garage on third and Liberty Streets. N. Bosler, care Tyler Hotel, Third and Jefferson Streets, lessee. $50,000.

LOUISIANA

GONZALES, LA.—Parish School Board will erect school building. $60,000.

NEW ORLEANS, LA.—Dept. of Public Finances, Accounting Division, will construct the Isaac Delgade Central Trades School here.

NEW ORLEANS, LA.—Times-Picayune Publishing Co., 314 Camp Street, proposes building four story, 85 x 150 ft., steel and concrete plant, on Camp and North Streets. M. H. Goldstein, Perring Building Architect.

OBERLIN, LA.—R. G. Corkern, Parish Supt., will construct the Kinder High School Building here. J. W. Smith, Monroe, La., Architect.

MARYLAND

BALTIMORE, MD.—M. & S. Shoe Co., 500-16 East Lombard Street, plans to build three story, 75 x 180 ft., concrete and brick, factory, on Oliver Street, near Guilford Avenue. Architect not selected. $75,000.

BALTIMORE, MD.—Zell Motor Car Co., 11-15 East Mt. Royal Avenue, soon receives bids for building three story, 60 x 70 ft., reinforced-concrete and brick, auto storage and repair shop on Mt. Royal Avenue. E. H. Glidden and T. W. Pietsch, 1210 Amer. Building, Architects. $50,000.

ELLICOTT CITY, MD.—C. A. Gambrill Mfg. Co., 109 Commerce Street, Baltimore, is having plans prepared by A. E. Baxter Eng. & Appraisal Co., Engrs., Ellicott Sq., Buffalo, for two story reinforced-concrete warehouse, wheelpit and machine shop here. $60,000.

MASSACHUSETTS

CAMPELLO, MASS. (Brockton P. O.)—G. E. Keith Co., Station Street, Brockton, let contract for building two story, 60 x 70 ft., power plant and 6 x 7 x 40 ft. reinforced-concrete tunnel, here, to Westcott & Mapes, 207 Orange Street, New Haven, Conn. $100,000.

FALL RIVER, MASS.—Fall River Dairy Co. plans to build dairy on Bedford and Quarry Streets. C. P. Doris, president. Architect not selected. $50,000.

GARDNER, MASS.—Lee & Hewett, Architects, 1123 Broadway, New York City, will alter present six story factory here and design four story, 60 x 260 ft., and three story, 44 x 150 ft., brick, concrete and steel additions for Heywood Bros. and Wakefield Co.

HOLYOKE, MASS.—Goetz Silk Mfg. Co., 642 South Summer Street, proposes building two story brick and steel addition to factory. $60,000.

LOWELL, MASS.—The legislature has authorized the expenditure of $1,000,000 for the construction of a public auditorium here.

SPRINGFIELD, MASS.—City Clerk will build a three story brick, steel and concrete addition to Forrest Park School. B. H. Seavury, 21 Besse Place, Architect. $180,000.

SPRINGFIELD, MASS.—National Equipment Co., 662 North Main Street, will build three story, 100 x 372 and 35 x 162 ft., reinforced concrete addition. A. E. Stephens Co., 128 Chestnut Street, contractor. $100,000.

WORCESTER, MASS.—Royal Worcester Corset Co., 30 Wyman Street, let contract for building five story, 71 x 240 ft., brick addition to plant on Grand Street to E. D. Ward Co., 82 Foster Street. $130,000.

MICHIGAN

DECATUR, MICH.—O. D. Newell, secretary Board of Education, will construct a high school building. R. A. LeRoy, Kalamazoo, Mich., Architect.

DETROIT, MICH.—Detroit Seamless Steel Tube Co., Jefferson Avenue, W., and Nineteenth Street, had plans prepared by A. Kahn, Architect, Marquette Building, for concrete, brick and steel plant. Plans include three 20 x 90 x 550 ft. manufacturing units, 70 x 100 ft. heating plant and two story administration building, concrete foundation. $3,000,000.

GRAND RAPIDS, MICH.—Board of Education will construct two grade school buildings, three stories, 75 x 172 feet, fireproof construction. H. H. Turner, 234 Division Avenue, N., Grand Rapids, Mich., Architect.

HIGHLAND PARK, MICH (Detroit P. O.)—Ford Motor Co. soon lets contract for constructing four story, 80 x 260 ft., reinforced-concrete, brick and steel service station, on Woodward Avenue. A. Kahn, Marquette Building, Detroit, Architect.

JACKSON, MICH.—Tentative plans have been prepared for the construction of a new contagious disease hospital by Edward F. Stevens, Architect, Boston, Mass.

JACKSON, MICH.—American Oil Corp., Belden Road, had plans prepared by H. R. Graf, Architect, Jackson, for one story, 74 x 120 ft., reinforced-concrete, steel and brick plant, and 30 x 40 ft. concrete boiler house.

KALAMAZOO, MICH.—Citizens voted bond issue of $615,000 for a new Frank Street school building and for repairs and additions to other buildings.

LANSING, MICH.—An appropriation of $1,500,000 for the University of Michigan has been signed. The bill provides for $200,000 for the completion and equipment of the university library, $700,000 for the construction of a new hospital and $300,000 for the erection and equipment of a teachers' training high school.

MT. PLEASANT, MICH.—Transport Truck Co. had plans prepared by J. J. Bachman, Architect, Flint, for 40 x 50 ft. power plant and 150 x 300 ft. assembly plant, brick and steel, concrete foundation. $80,000.

PONTIAC, MICH.—Briscoe Mfg. Co., Woodward Avenue, Detroit, let contract for building one story, 60 x 200 ft., reinforced-concrete and steel factory, on Paddock and Jessie Streets, to Slater Construction Co., Pontiac.

MINNESOTA

ANOKA, MINN.—State Board of Control St. Paul, Minn., will construct reinforced and brick administration building at State Asylum here. C. H. Johnson, 715 Capitol Building, St. Paul, Minn., Architect. $80,000.

CAMPBELL, MINN.—J. A. McDonald Construction Co., Minneapolis, Minn., have contract for constructing a consolidated school building here. $70,540.

CANBY, MINN.—Clemens F. Full, Taunton, Minn., will construct school building on Section 16, Township of Burton, R. 43, Yellow Medicine County.

FARIBAULT, MINN.—Wm. O'Neil & Son Company of this city was low bidder for general contract for constructing a new building for employees at the Faribault State School for Feebleminded. $45,917.

MINNEAPOLIS, MINN.—The Flour City Baking Company has been planning for the $100,000 bakery at Fifth Avenue, S., and Thirty-sixth Street.

MINNEAPOLIS, MINN.—Cedar Lake Ice Co., 1224 Plymouth Building, is receiving tentative bids for building five story, 140 x 160 ft., reinforced-concrete and brick, ice storage plant. $150,000.

ROCHESTER, MINN.—State Board of Control, St. Paul, Minn., will build a two story reinforced concrete and brick hospital here. C. H. Johnson, 715 Capitol Building, St. Paul, Minn., Architect. $50,000.

ROUND LAKE, MINN.—B. C. Benkman, clerk, will build a school here. G. Pass & Son, Mankato, Architects. $54,000.

ST. CLOUD, MINN.—Granite City Investment Co. will construct five story building of brick and steel on Main Street. Holstead & Sullivan, Palladio Building, Duluth, Minn., Architects. $300,000.

TRACY, MINN.—Lester J. Fitch, Chairman Building Committee, proposes constructing a brick church for the Methodist Episcopal Church here. W. L. Alban, 347 Endicott Building, St. Paul, Minn., Architect.

WINNEBAGO, MINN.—Bracker Construction Co., Minneapolis, Minn., have contract for constructing the high school building here. $63,994.

MISSISSIPPI

CHARLESTON, MISS.—Bank of Charleston commissioned Hanker & Cairns, Architects, Memphis, Tenn., to erect building. $100,000.

MERIDIAN, MISS.—Meridian Convention Bureau organized with James Bozeman, secretary, to arrange plans for financing purchase of site and erection of auditorium with seating capacity of about 5000.

MISSOURI

KANSAS CITY, MO.—C. E. Phillips Building Co. will erect apartment house at 10th and Central Streets; three stories and basement, 42 x 119 feet, brick. N. E. Peters, Architect, 715 Dwight Building, Kansas City. $60,000.

OZARK, MO.—County Treasurer will construct the Christian County Courthouse. Earl Hawkins, Architect. $100,000.

ST. JOSEPH, MO.—Swift & Co., Union Stock Yards, Chicago, let contract for building two story, 42 x 110 ft., reinforced-concrete, steel and brick addition to cold storage plant, on Packers Avenue, here, to Lehr Construction Co., 1712 Frederick Avenue. $30,500.

ST. JOSEPH, MO.—Conser Laundry Co., 908 Francis Street, is having plans prepared by R. Meir, Architect, 203 Lincoln Building, for two story, 122 x 153 ft., reinforced-concrete and brick laundry, on Seventeenth and Buchanan Streets. $40,000.

ST. LOUIS, MO.—Work will be begun in the near future for constructing plant of the new National Barium and Chemical Co. and of the new General Motors Co. and Pullman Plants.

ST. LOUIS, MO.—Bemis Bag Co., 607 South Fourth Street, let contract for building reinforced-concrete and brick warehouse and office, 2402 South Second Street, to Fruin-Colnon Construction Co., Merchants Laclede Building. $60,000.

ST. LOUIS, MO.—National Barium & Chemical Co., 7338 Arlington Avenue, plans to build chemical plant near Union Street and National bridge. O. Virden, President. Cost to exceed $50,000.

ST. LOUIS, MO.—Plans for the raising by private subscription of a million dollar fund for the construction of a Masonic Temple in St. Louis were made at a meeting of prominent Masons in the office of Mayor Henry W. Kiel; $450,000 of the fund has already been provided for.

ST. LOUIS, MO.—Weber Automobile Co., 1900 Locust Street, proposes building three story, 150 x 250 ft., concrete factory, on Nineteenth and Locust Streets. Architect not selected. $350,000.

MONTANA

BOZEMAN, MONT.—Hoggson Brothers, of Chicago and New York bank planning specialty, have been awarded contract for the construction, decorating, furnishing and equipping the new combination bank and office building for the Commercial National Bank of this city.

LEWISTOWN, MONT.—A $300,000 structure will be built to replace the Fergus County High School Building destroyed by fire last year. The structure will go up in two units, each costing $150,000.

NEW JERSEY

CHELSEA, N. J.—Plans are being prepared by McKim, Mead & White, 101 Park Avenue, New York, for constructing a hotel here with 2400 sleeping rooms and 2400 baths, to be erected on three blocks of beach frontage at Albany Avenue. Estimated cost $10,000,000.

NEWARK, N. J.—Plans have been completed for the construction of a new group of buildings for the Essex Mountain Sanatorium. Jordan Green, Architect. $410,000.

NEWARK, N. J.—American Concrete Steel Co., Essex Building, has contract for constructing the first section of three buildings for the new plant of the Otto Heineman Phonograph Supply Co. on Thomas and Mulberry Streets. $375,000.

NEWARK, N. J.—O. Heineman Co., Inc., 145 Jackson Street, let contract for four story, 80 x 400 ft., reinforeed-concrete and steel factory, on Thomas Street, to American Concrete Steel Co., 27 Clinton Street. $500,000.

TRENTON, N. J.—Atlas Tire & Rubber Co. let contract for one story, 90 x 360 ft. and 82 x 92 ft., concrete, brick and steel plant, to J. H. Morris Co., 615 Broad Street Bank Building. $250,000.

NEW YORK

BUFFALO, N. Y.—Johnston-Kurtz Co., 151 Franklin Street, let contract for building three story, 31 x 100 ft., addition at 153 Franklin Street to C. Berricks Sons, 1151 Main Street. $25,000.

BUFFALO, N. Y.—Beale & Sons, 7375 Park Street, let contract for two story, 20 x 80 ft., steel and concrete plant on Mesner Street to G. H. Schickler & Son, Buffalo. $25,000.

BUFFALO, N. Y.—H. Hayman Co., 856 East Ferry Street, let conract for building one story, 80 x 100 ft., steel foundry to Ferguson Steel & Iron Co., 1399 Bailey Avenue. $25,000.

LONG ISLAND CITY, N. Y.—A. Cohen, 212 Fifth Avenue, New York City, let contract for building three story, 83 x 123 ft., brick and steel mill on William and Freeman Avenues to J. W. Bishop, 103 Park Avenue, New York City. $60,000.

LONG ISLAND CITY, N. Y.—S. Blickman, 199 Lafayette Street, New York City, having revised plans prepared by H. Baleom, Architect, 10 East Forty-seventh Street, New York City, for six story, 132 x 200 ft., reinforced concrete and steel factory, on Nott, Manly, Anable and Mount Streets, here.

NEW YORK, N. Y.—Fifteenth Street Garage Corp., 412 Fifth Avenue, soon lets contract for building two story, 100 x 100 ft., brick and steel garage, 534 West Thirty-ninth Street, through to 535 West Thirty-eighth Street. J. S. Maher, 431 West Fourteenth Street, Architect. $75,000.

NEW YORK, N. Y.—Morania Realty Co., 427 West Fourteenth Street, soon lets contract for building two story, 92 x 200 ft., brick and steel garage, Eighteenth Street near Tenth Avenue. J. S. Maher, 431 West Fourteenth Street, Architect. $100,000.

SYRACUSE, N. Y.—The Y. M. C. A. is contemplating constructing a boys' building of modern type at Montgomery Street. $200,000.

SYRACUSE, N. Y.—Kallfelz Bros., 215 Magnolia Street, let contract for two story, 95 x 150 ft., bakery on Shonnard and South Geddes Streets to R. F. Burns, Syracuse. $70,000.

SYRACUSE, N. Y.—Tentative Plans have been made by Napoleon H. LaVaute, Architect, for constructing an apartment house that will accommodate 60 families. Estimated cost $400,000.

WATERTOWN, N. Y.—Northern Oil & Fuel Co., 469 Coffeen Street, plans extensive additions to plant to include two story, 100 x 275 ft., mill construction warehouse, costing between $20,000 and $30,000; testing laboratory for handling tests of gasoline, oils and greases. Address G. W. Lane, General Manager.

NORTH CAROLINA

BURLINGTON, N. C.—City has gift of $100,000 to erect community building; plans include gymnasium and swimming pool, clubrooms and game rooms for boys and girls, bowling alleys, classrooms, library rooms, motion picture equipment, auditorium, rest rooms, lockers, dressing rooms, etc. J. L. Scott, Chairman Executive Committee.

WINSTON-SALEM, N. C.—Wachovia Bank & Trust Co. has awarded the contract to Gogle Bros. Co., for the $325,000 addition to their building. Milburn, Heister & Co., Architects.

OHIO

AKRON, OHIO.—Plans have been completed for the construction of a new and up-to-date hotel and also a new theater. John Eberson, Chicago, Ill., Architect. $1,000,000.

AKRON, OHIO.—Construction will begin soon on a new $1,000,000 hotel and theater at the Garfield hotel site on S. High Street, to be nine stories high.

CLEVELAND, OHIO.—Work will be started immediately for constructing the twelve new double houses here to cost $140,000.

CEVELAND, OHIO.—B'nai Brith is contemplating constructing an orphans' asylum here to cost $1,000,000.

CLEVELAND, OHIO.—City Auto Tire & Supply Co., 2415 Chester Avenue, let contract for one story, 40 x 137 ft., concrete, steel and brick factory addition, to S. W. Emerson Co., 1900 Euclid Avenue. $25,000.

CLEVELAND, OHIO.—Leonard Electric Mfg. Co., 433 Champlain Avenue, had plans prepared by G. S. Rider Co., Architeets, 601 Century Building, for two story, 86 x 115 ft., concrete, steel and brick factory, at 3907 Perkins Avenue. $60,000.

CLEVELAND, OHIO.—Warner & Swasey Co., 5701 Carnegie Avenue, let contract for one story, 90 x 176 ft., steel addition to factory at 5815 Cedar Avenue, to United Erecting Co., American Trust Building. $30,000.

DAYTON, OHIO.—The Borches Automobile Company will construct a building at 366-370 S. Main Street to cost $175,000. Frank Hill Smith, Inc., Architect.

IVORYDALE, OHIO.—Proctor & Gamble Co., Gwynne Building, Cincinnati, let contract for building two story, 100 x 400 ft., concrete, steel and brick warehouse, here, to H. K. Ferguson Co., 6523 Euclid Avenue, Cleveland.

NORWALK, OHIO.—Announcement has been made that the Citizens National Banking Co. will construct a business and office building on the south side of Main Street. $150,000.

PLYMOUTH, OHIO.—Root-Heath Mfg. Co. let contract for concrete, steel and brick plant to H. K. Ferguson Co., 6523 Euclid Avenue, Cleveland.

OKLAHOMA

IDABEL, OKLA.—McCurtain County is having plans prepared for courthouse and jail.

MUSKOGEE, OKLA.—Bids will be received some time this month for constructing an exhibit building on the Muskogee Fair grounds to cost approximately $50,000.

NEWKIRK, OKLA.—City election soon to vote on $110,000 bonds to build electric light plant and service lines.

OKLAHOMA CITY, OKLA.—Kreipe-Schaffer Construction Co., El Reno, Okla., was awarded contract for constructing a new dormitory and president's home at Oklahoma College for Women at Chickasha. $142,898.

OKMULGEE, OKLA. — First Presbyterian Church will erect building. Address: The Pastor. $65,000.

TULSA, OKLA.—Plans are being drawn for the construction of a church at Thirteenth and S. Boulder. $150,000.

WOODWARD, OKLA.—Henry & Hatfield of Indianapolis, Ind., were awarded contract for constructing the U. S. Post Office here. $84,398.

PENNSYLVANIA

HERSHEY, PA.—Hershey Chocolate Co. will build five story, 180 x 240 ft., candy factory, concrete foundation.

NEW CASTLE, PA.—Contract will soon be awarded for the construction of the new theater building of the West Penn Photo Play Co. here at a cost of $150,000.

PHILADELPHIA, PA.—Baxter, Kelly & Faust, Tioga and C Streets, let contract for building four story, 56 x 172 ft., brick factory, to H. H. Burrell, 206 Quince Street.

PITTSBURGH, PA.—T. Hannah, Architect, 209 Ninth Street, is receiving bids for five story, 80 x 100 ft., fireproof garage, on Penn Avenue and Seventeenth Street, for Seventeenth Street Garage Co.

WESLEYVILLE, PA.—Citizens voted bond issue for $69,000 to erect the first unit of a new 16 room school building here which, when completed, will cost $125,000.

RHODE ISLAND

PROVIDENCE, R. I.—Graham Mfg. Co., 94 Point Street, let contract for two story, 43 x 100 ft., brick and timber addition to machine shop on Willard Avenue to O. D. Purington & Co., 624 Industrial Trust Building. $30,000.

PROVIDENCE, R. I.—B. B. Knight Estate, Broad Street, proposes building one story, 80 x 140 ft., brick, steel and concrete garage on Dorrance and Eddy Streets. H. Cummings, 397 Massasoit Avenue, East Providence, contractor. $50,000.

WOONSOCKET, R. I.—Guerin Spinning Co., Social Street, let contract for building three story, 85 x 265 ft., brick and timber addition to W. Aubin, 1103 Diamond Hill Road. $110,000.

TENNESSEE

CHATTANOOGA, TENN.—Herman Pechman has plans by W. H. Sears, Chattanooga, for fifteen bungalows in Highland Park. $75,000.

DYERSBURG, TENN.—Baptist Church will erect building. Address: The Pastor. $60,000.

HENDERSON, TENN.—Freed-Hardeman College is having plans prepared by McGee & Lester, Memphis. for dormitory, 94 x 85 feet J. G. Hardeman, Henderson. $30,000.

KNOXVILLE, TENN.—City to erect high school addition, auditorium and gymnasium, 190 x 200 ft. on Central and Fourth Avenues. Albert B. Baumann, Arehitect, 713 Henson Building, Knoxville. $150,000.

MCKENZIE, TENN.—City plans to ereet two or three school buildings for MeTyeire Training School for Vanderbilt University, Nashville; cost not less than $50,000. Address Will Regenold, Chairman, 141 Magnolia Street, McKenzie.

NASHVILLE, TENN.—South Nashville Improvement Association, J. J. Hill, chairman, Building Committee, will erect apartment house at Lindsley and First Avenues. $50,000.

TEXAS

BELTON, TEX.—Baylor Female College will in the near future begin to oonstruct a new dormitory containing 100 rooms, and a science hall. Both buildings will be three stories and fireproof, costing approximately $200,000.

DALLAS, TEX.—Tefereth Israel Congregation, W. M. Levy, secretary, will erect synagogue. $75,000.

DENTON, TEX.—The oongregation of the First Methodist Church is making plans for the construction of a new church building here to cost between $80,000 and $100,000.

EL PASO, TEX.—Central Baptist Church, Rev. George W. McCall, pastor, has plans by O. H. Thorman, 725 First National Bank Building, El Paso, for building at Virginia and Montana Streets, one story, brick and steel. $100,000.

GILMER, TEX.—Treasury Department, Jas. A. Wetmore, Acting Supervising Arehiteet, Washington, D. C., opened bids to erect postoffice building. Henry & Hatfield Construction Co., Indianapolis, Ind., is lowest bidder at $48,572.

MT. PLEASANT, TEX.—Cooper & Lune, Inc., Newark, N. J., were low bidders for constructing U. S. Post Office here. $46,969.

RANGER, TEX.—The Surface Foam Appliance Co. of Tulsa, Okla., will construct a $250,000 oil tank fire extinguisher factory here.

RANGER, TEX.—Work will soon be started on the $100,000 fireproof structure for public school.

WACO, TEX.—Arrow Refining Company will construct a new refining plant here to cost $300,000.

WASHINGTON

SEDRO WOOLLEY, WASH. — Warreck Construction Co., Arcade Building, Seattle, Wash., was awarded contract for construoting an infirmary building and female ward building at Sedro Woolley. $89,530.

SPOKANE, WASH.—S. G. Morin, local contractor, was low bidder for the State Custodial School at Medical Lake. $159,445.

TOPPENISH, WASH.—The Utah-Idaho Sugar Co. will erect a sugar factory here to cost $800,000.

WISCONSIN

JANESVILLE, WIS.—Samson Tractor Co. let contract for building second unit of plant, 200 x 500 ft., to J. P. Cullen, Jacksonville. $500,000.

LAKE MILLS, WIS.—W. L. Fritz, Columbus, will build two story, 60 x 200 ft., reinforced-concrete and brick, canning factory, brick foundation, on Main Street, here. $60,000.

LAKE MILLS, WIS.—Wolfram Shoe Co., Watertown, is building two story, 50 x 145 ft., reinforced-concrete and brick, shoe factory. Architect not selected. $60,000.

NEENAH, WIS.—Immel Construction Company, Fond du Lac., Wis., was awarded contract for constructing a new plant for the National Textile Fiber Co.

RACINE, WIS.—Hamilton Beach Mfg. Co., Rapids Dr., is having revised plans prepared for two story, 40 x 90 ft., brick warehouse. A. F. Flegel, 223 Sixth Street, Architect. $40,000.

SUPERIOR, WIS.—H. Lurye & Sons, 527 Tower Avenue, soon lets contract for building three story, 40 x 150 ft., concrete and brick, factory. E. S. Radcliffe, U. S. Natl. Bank Building, Architect.

TWO RIVERS, WIS.—Eggers Veneer Seating Co. let contract for building four story, 60 x 220 ft., brick and steel factory, to W. Oeflein, 136 Hanover Street, Milwaukee. $100,000.

TWO RIVERS, WIS.—Hamilton Mfg. Co. let contract for building one story, 50 x 150 ft., mill eonstruction factory and five story, 100 x 150 ft., mill construction factory with steel frame concrete foundation, to W. Oeflein, 136 Hanover Street, Milwaukee. $130,00.

WAUSAU, WIS.—Peth Candy Co. had plans prepared for four story, 60 x 70 ft., brick and mill construction factory. Oppenhainer & Speer, Wausau, Architects. $50,000.

WEST BEND, WIS.—West Bend Woolen Mills plans to build three story, 60 x 380 ft., reinforced-concrete and brick mill. Lockwood, Greene & Co., 28 South Dearborn Street, Chieago, Engrs. $100,000.

At the Architect's Service

Present Advertising

In these days of high cost of manufacturing, more than in ordinary times, the protection of quality in the materials and equipment used in the construction of buildings is definitely related to advertising. The manufacturer who consistently and boldly advertises and continues to advertise his products to the architects of the country establishes a legitimate claim on their confidence and consideration which the non-advertiser can hardly expect to share equally.

Granting the latter an equal intention of honesty, the fact remains that he is not committing himself in the public prints of the profession; and the wise architect recognizes the greater safety of dealing with the manufacturer who does so commit himself.

The architect must necessarily recognize the protection, the insurance value of dealing with the manufacturer whose public pledge of quality comes regularly to him and the other members of his profession. Self-protection and client-protection, which is the same thing, demand it; and his sense of soundness endorses it.

Ads. marked E.O.W. appear every other week Ads. marked E.F.W. appear every fourth week
Ads. marked O.A.M. appear once a month

ECCO Dependable Insulated WIRE

ECCO advertising stimulates public interest in the true values of electrical installations. It drives home the value of first quality materials — of competent, well-paid workmanship. Because of such advertising as this, the public accepts with greater readiness, specifications and bids for good materials throughout, and is more willing to pay for skill and time in making installations.

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THE significance and importance of the steam-pipe in a steam power plant is appreciated and accepted immediately by everyone. The even greater importance of insulated wire in the electrical system is so much less obvious that it is not so readily recognized.

Insulated wire provides the outlets for the energy developed in the central station. It is a power carrier, a power distributor which adds to your plant all the advantages of an individual power generating system, with unlimited capacity and 24-hour operation —*all* the advantages, *less* the overhead, the wastage and responsibility of steam power plant maintenance.

But more than this—insulated wire determines the economy and dependability of your electric power.

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THE ELECTRIC CABLE CO.
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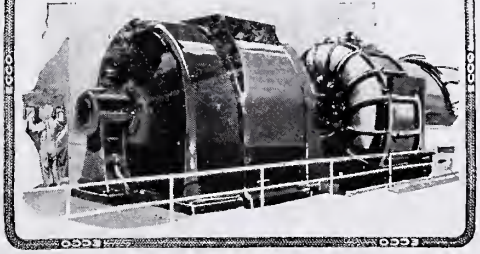

ECCO Advertising is designed to sell wire by constructive work for the electrical industry. If you use ECCO, ECCO publicity works for you.

DIGEST
Of Manufacturers' Data

ARCHITECTS' OFFICE EQUIPMENT

INKS:

Higgins, Chas. M., & Co., 271 9th St., Brooklyn.

PASTES:

Higgins, Chas. M., & Co., 271 9th St., Brooklyn.

PENCILS:

Dixon Crucible Co., Jos., Jersey City, N. J.

CASEMENT WINDOWS

METAL:

Crittall Casement Window Co., Detroit, Mich. Crittall metal casement windows for office buildings, banks, public buildings, churches, university buildings, hospitals, residences, stores, factory offices, etc.

Pomeroy Co., Inc., S. H., 30 E. 42d St., N. Y.

CEMENT AND PLASTER

CEMENT:

Atlas Portland Cement Co., 30 Broad St., N. Y.

CORNER BEADS:

Milwaukee Corrugating Co., Milwaukee, Wis.

PLASTER:

Best Bros. Keene's Cement Co., Dept. C, Medicine Lodge, Kans., New York, Chicago. "Regulnr" for base and finish coats, general plnstering; "Fine" for all ornamental plastering; Caen stone, etc.; "Coarse" and "Superfine" for art marble.

National Kellastone Co., The, Chicago, Ill.

SPECIALTIES:

Bostwick Steel Lath Co., The, Niles, Ohio. Bostwick Corner Bead, Ground Bead, Cement Stops, Wall Plugs and Wall Ties.

General Fireproofing Co., The, Youngstown, Ohio. G-F Cold Rolled Channels, Corner Bead, Wall Ties and Crimped Furring.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. Corner beads, "Kahn" curb bars, "Truscon" slotted inserts; "Kahn" ndjustable inserts; "Trus-Con" National socket lnserts; "Kahn" elastic filler and armor plates for expansion joints.

STUCCO:

National Kellastone Co., Tbe, Chicago, Ill.

COLUMNS

WOOD:

Hartmann-Sanders Co., Chicago, Ill.

CONCRETE REINFORCEMENT

REINFORCEMENT:

American Steel & Wire Co., Chicago-New York.

Berger, The, Mfg. Co., Canton, Ohio.

Bostwick Steel Lath Co., The, Niles, O. Bostwick "Truss-V-Rib."

Concrete Engineering Co., Omaha, Neb.

Truscon Steel Co., Dept. 68, Youngstown, Ohio. Representatives in principal cities. "Kahn" system reinforced concrete; "Kahn" bars; "Rib" bars; "Rib" lath; "Floretyles," "Floredome," etc.; flat and beamed ceilings of all types.

DAMPPROOFING

(See Water and Dnmpproofing)

DAYLIGHTING

Berger, The, Mfg. Co., Canton, Ohio.

DOORS AND TRIM

DOORS, STEEL:

Lupton's, David, Sons Co., Philadelphia, Pa.

HOLLOW STEEL DOORS:

Interior Metal Mfg. Co., Jamestown, N. Y.; Bankers Trust Bldg., 501 Fifth Ave., N.Y.C. Hollow steel doors in all standard sizes.

STEEL ROLLING DOORS:

Edwards Mfg. Co., The, 319-349 Eggleston Ave., Cincinnati, O. Send specifications for estimate.

THIS department is intended to assist our subscribers in readily determining the names and addresses of manufacturers of products in which they may be interested together with brief data about their material.

The headings and sub-headings are arranged alphabetically and have been selected in accordance with the intent of meeting the architect's thought in preparing his specifications.

If the information desired is not found here, it will gladly be supplied by the Service Department of THE AMERICAN ARCHITECT.

DOORS AND TRIM—Continued

WOOD:

Curtis Companies, Clinton, Iowa. Doors, sash, trim, stairways, sideboards, kitchen cupboards, colonades, etc.

DUMB-WAITERS

Sedgwick Machine Wks., 159 W. 15th St., N.Y.

ELECTRICAL EQUIPMENT AND SUPPLIES

CONDUITS AND FITTINGS:

National Metal Molding Co., 1111 Fulton Bldg., Pittsburgh, Pa. "NATIONAL" metal molding for surface wiring; "SHERADUCT" and "ECONOMY" conduits, "FLEXSTEEL" armored cable and a complete line of fittings.

Youngstown (O.) Sheet & Tube Co. "Buckeye" rigid conduit. "Realflex" armored conductor.

COOKING APPLIANCES:

General Electric Co., Schenectady, N. Y.

INSULATED WIRE:

Habirshaw Electric Cable Co., 10 E. 52d St., New York City.

LIGHTING SYSTEMS:

General Electric Co., Schenectady, N. Y.

OUTLET BOXES:

General Electric Co., Schenectady, N. Y.

PANEL BOARDS:

Benjamin Electric Mfg. Co., Chicago, Ill. "Benjamin-Starrett" panel boards.

SWITCHES:

General Electric Co., Schenectady, N. Y.

WIRES AND CABLES (Insulated):

Electric Cable Co., The, 10 East 43rd St., New York City.

General Electric Co., Schenectady, N. Y.

Okonite Co., The, 501 Fifth Ave., N. Y. C. Caudee Potheads. "Mauson" and "Okonite" Tape.

ELEVATORS AND HOISTS

CONVEYORS:

Otis Elevator Co., 11th Ave. and 26th St., N. Y. C. Gravity spiral.

ELEVATORS:

American Elevator & Machine Co., Louisville, Ky.

Kaestner & Hecht Co., 500 South Throop St., Chicago, Ill.

Otis Elevator Co., 11th Ave. and 26th St., New York. Offices in principal cities of the world. Electric, hydraulic, belt and hand power, inclined freight elevators and escalators.

ELEVATORS AND HOISTS—Continued

ELEVATORS (Hand Power):

Sedgwick Machine Wks., 159 W. 15th St., N.Y.

ELEVATOR CABLE:

American Steel & Wire Co., Chicago-New York.

HOISTS (Ash):

Otis Elevator Co., 11th Ave. and 26th St., N. Y. C. Automatic coal and ash hoists, blast furnaces and ship hoists.

FIREPROOFING MATERIALS

Johns-Manville Co., H. W., New York City.

CAGING OR FORMING

Mitchell-Tappen Co., 17 John St., N. Y. C.

METAL LATH:

Berger, The, Mfg. Co., Canton, Ohio.

Bostwick Steel Latb Co., The, Niles, O.; 135 N. 22nd St., Phila., Pa. Bostwick "Truss-Loop" and expanded metal in three types; "Diamond A," Niles and "Lock."

Concrete Engineering Co., Omaba, Neb.

General Fireproofing Co., The, Youngstown, Ohio. Herringbone Rigid Metal Lath. Diamond-Rib Expnnded. Key Extended and Genfire Sheet Steel.

Milwaukee Corrugating Co., Milwaukee, Wis.

Truscon Steel Co., Dept. 68, Youngstown, O. Representatives in principal cities. "Hy-rib," "Rib" lath; "Diamond Mesh" lath.

FIRE PROTECTION

FIRE EXIT DEVICES:

Corbin, P. & F., New Britain, Conn.

FLOORS

COMPOSITION:

Barrett Co., The, 17 Battery Pl., New York. Branch offices in all large cities.

Johns-Manville Co., H. W., New York City.

National Kellastone Co., The, Chicago, Ill.

FLOOR COATING:

General Fireproofing Co., The, Youngstown, Ohio. G-F Concrete Hardener, Floor Primer and Floor Coating.

Imperial Paint Co., 76 Tenth St., Long Island City, N. Y. "Impaco" cement coating.

Trus-Con Laboratories, Dept. 68, Detroit, Mich. Representatives in principal cities. "Trus-Con" Floor hardener. "Trus-Con Agatex," "Trus-Con" floor enamel.

PARQUET:

Wood-Mosaic Co., New Albany. Parquetry, hardwood flooring, veneer and lumber.

WOOD BLOCK:

Carter Bloxonend Flooring Co., 1301 R. A. Long Bldg., Kansas City, Mo.

FOUNDATIONS

PILES:

Raymond Concrete Pile Co., 149 Cedar St., N. Y. C. "Raymond" concrete piles are made by driving a reinforced steel shell which is left permanently in the ground. this shell is then filled with concrete.

FURNITURE AND DECORATIONS

DRAPERIES, UPHOLSTERIES, WALL COVERINGS:

Standard Textile Products Co., The, 320 Broadway, New York. "Sanitas" Tinted, Decorative and Glnzed. Fast colors, sanitary. For private homes, hotels, auditoriums, institutions, etc.

METAL:

Canton Art Metal Co., Canton, Ohio.

HARDWARE

BOLTS:

Corbin, P. & F., New Britain, Conn.

BUILDERS' HARDWARE:

Corbin, P. & F., New Britain, Conn.

Stanley Works, The, New Britain, Conn.

ALPHABETICAL INDEX OF ADVERTISERS ON PAGE 18

HARDWARE—Continued

BUTTS AND HINGES:

Corbin, P. & F., New Britain, Conn.

Lawson Mfg. Co., Superior and Franklin Sts., Chicago, Ill. "Nu" Jamb Hinge.

McKinney Mfg. Co., Pittsburgh, Pa.

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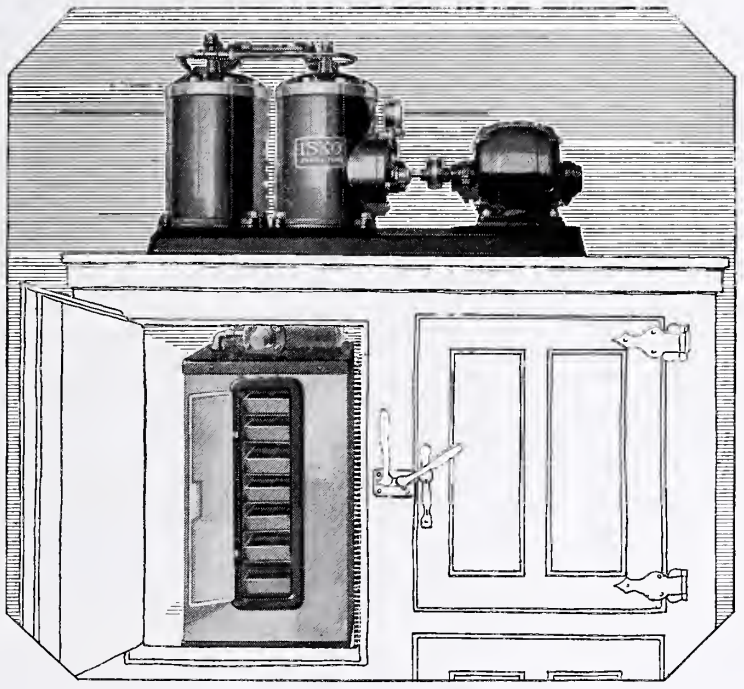
TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., June 4, 1919.—Sealed proposals will be opened in this office at 3 p. m., July 9, 1919, for furnishing the labor required in the construction complete, with materials that will be furnished by the Government, of the United States Post Office Building at Montevideo, Minn. Drawings and specifications may be obtained from the custodian of the site at Montevideo, Minn., or at this office, in the discretion of the Supervising Architect. Jas. A. Wetmore, Acting Supervising Architect. (2268-69)



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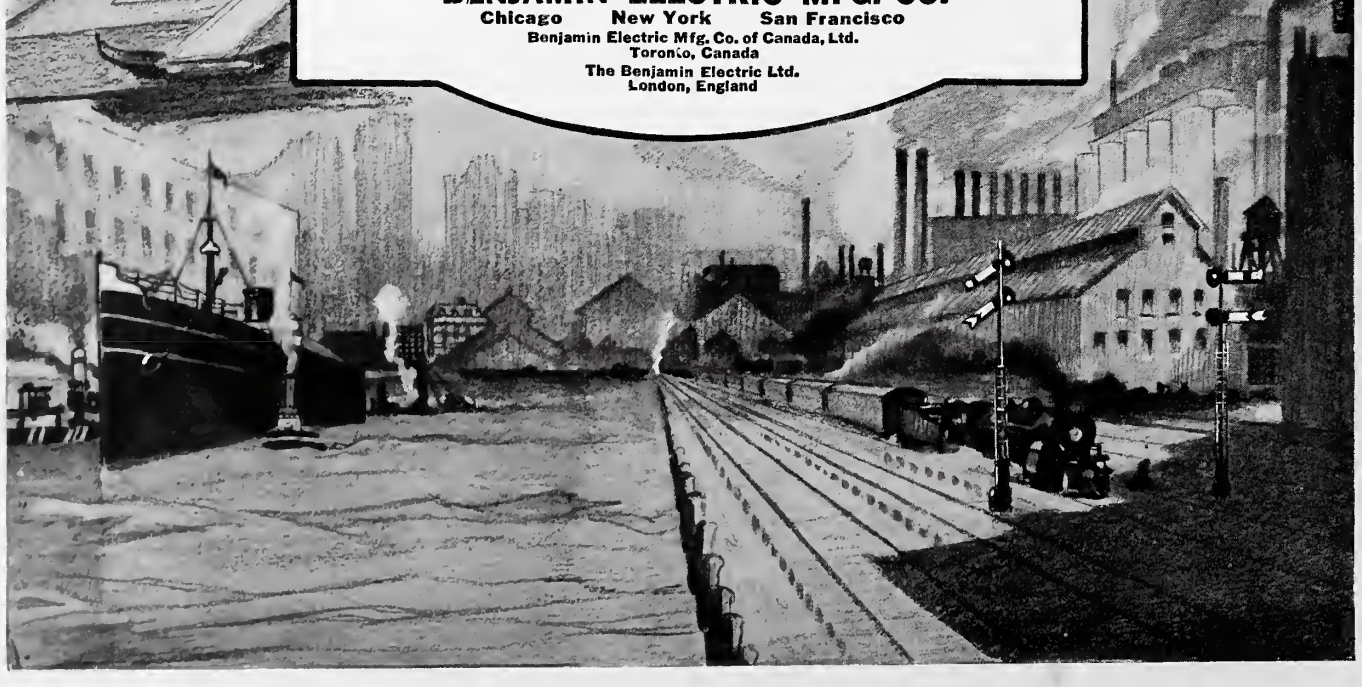

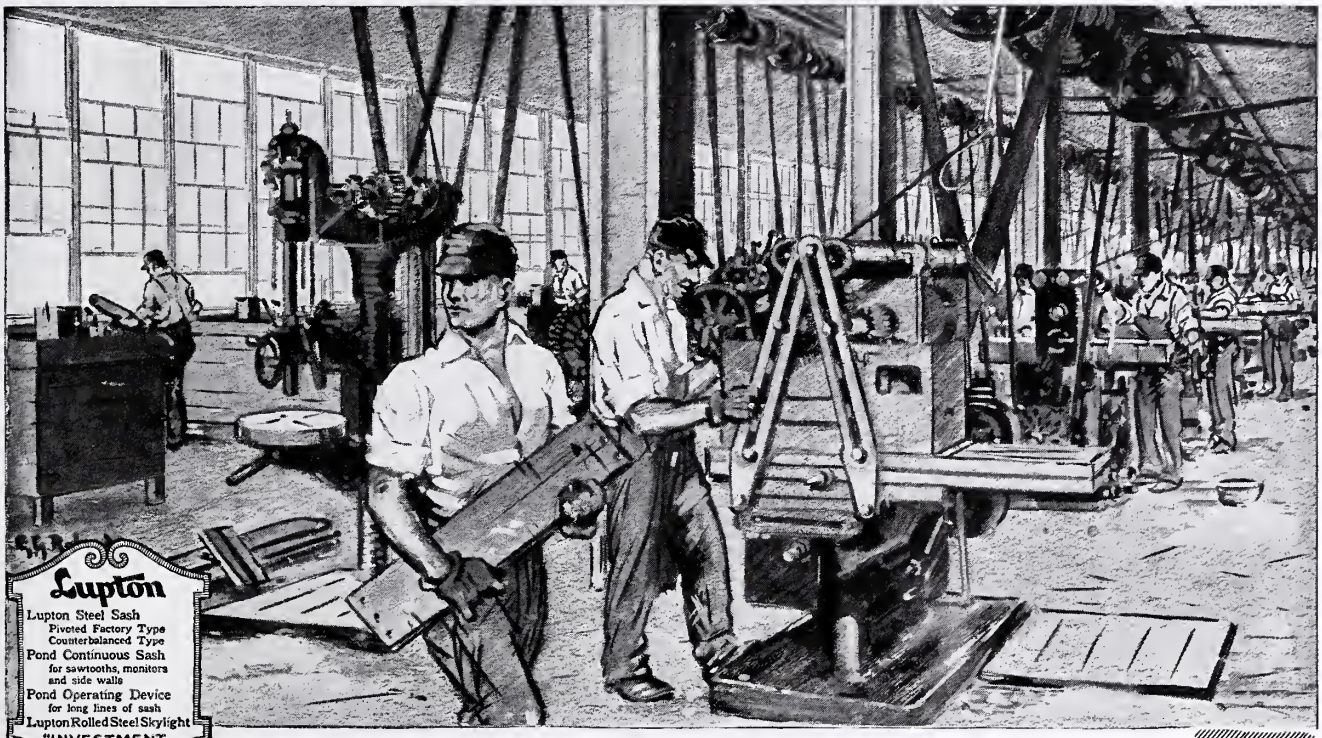

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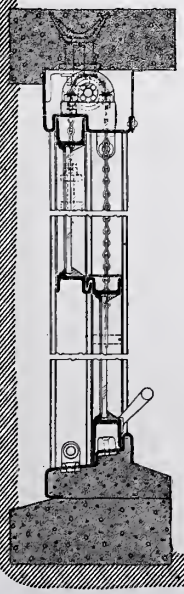

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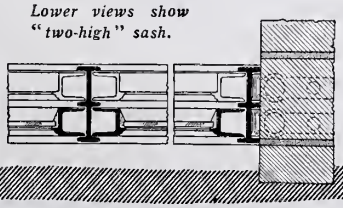

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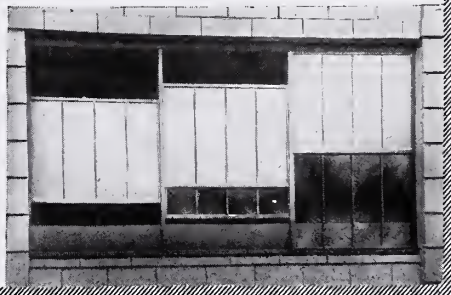

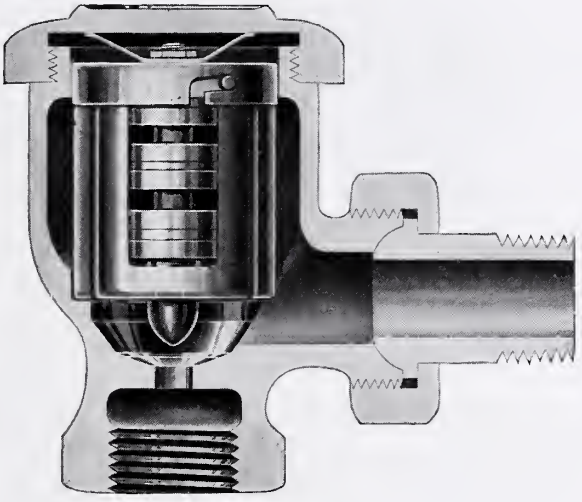

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